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Guest Editorial

The Changing Concept Concerning the Surgical Management of Diverticulitis

WHILE diverticula formation in the colon was described nearly a century ago by Cruveilhier, sufficient information concerning the clinical course of its complications has been accumulated only within recent years to permit accurate conclusions concerning their management. The treatment of uncomplicated diverticulitis, by general agreement, continues to be left in the hands of the internist. Since 1907, however, when W. J. Mayo reported the resection of portions of the sigmoid for diverticulitis in 5 cases, the surgeon has considered that the presence of complications such as stenosing peri-diverticulitis, colo-vesical fistula or abscess transfers the lesion to his particular field. It is an interesting commentary, incidentally, that hemorrhage from the bowel, which has been a frequent presenting symptom in individuals with diverticulosis coming under our observation, is not a complication requiring surgical intervention. Bleeding, whether constant and slight in amount or spontaneous, massive and dark, presents a serious diagnostic problem but has not in our experience required radical treatment.

A general opinion obtained for some years that carcinoma was likely to be found in association with inflammation of diverticula. Louis Wilson, in 1911, found four cases of carcinoma in association with diverticula of the colon in a total of 15 specimens, and the publication of his findings and other similar observations were no doubt responsible for this opinion. During the period referred to many surgeons concluded that since so intimate an association existed between the inflammatory process and malignant lesions, the primary resection of stenosing tumefactions in the sigmoid was justifiable—a conclusion which tremendously increased surgical mortality. The study of larger series of cases in recent years has indicated that this relationship is so rare that it may be regarded as purely coincidental. Since carcinoma and diverticulitis are both lesions which occur chiefly in the left colon of elderly individuals, it is to be expected that both lesions would occasionally occur simultaneously. Our own experience records only one such instance.

Rankin and Brown found only four accompanying carcinomas in a series of 227 cases of diverticulitis. There is no question that this parallelism has been over emphasized in the past and there is no doubt that it has been responsible for much ill-advised surgery. As the spectre of malignant degeneration receded reports accumu-

lated indicating that primary procedures on inflamed bowel carry a high mortality. For this reason, colostomy accompanied by a minimum of exploratory manipulation came into favor as a preliminary to resection. This procedure was advocated where resistant obstruction developed, where fistulas to the bladder or abdominal wall occurred and where pelvic abscess was present or impending. In the beginning the fecal diversion was accomplished by exposing a loop of the left colon above the lesion. Experience tended to demonstrate however that manipulation of the nearby colon was not without risk and that if further surgical procedures were indicated involvement of the descending or sigmoid colon in a colostomy emphatically limited the scope of secondary resection. For these reasons the transverse colon is now regarded as the safest and most logical site for the abdominal anus.

It was then noted that when a colostomy is performed and the fecal current diverted the peri-diverticulitis and the accompanying perisigmoidal inflammatory reaction will subside, in many instances to the extent that the bowel will appear almost normal when visualized radiographically. This does not happen, however, in a relatively short time and if the process is sufficiently severe to warrant a colostomy a number of surgeons agreed that the diversion of the fecal current should be maintained for approximately a year and that at the end of this time the stoma should be closed. Since complete and long continued diversion of the current was regarded as quite important the technique for transverse colostomy which had been described by Sir Hugh Devine appeared exceptionally appropriate.

Among the advantages claimed were that the left side of the colon is completely defunctionalized, as no fecal material can enter the distal stoma, and that liquid feces are not constantly discharged onto the skin with inconvenience to the patient from the resultant digestion and often severe and extensive irritation of the skin surrounding the colostomy opening.

Devine emphasized his opinion that the lower portion of the bowel by disuse and daily irrigations with saline or antiseptic solutions could, over a period of weeks, be rendered practically free of organisms.

The procedure originally described by Devine consists of making an upper right rectus incision, suturing together the adjacent surfaces of a loop of the transverse colon to form a long (about 10 cm.) spur, passing Ochsner clamps through stab wounds, one on either side of the longitudinal incision, and, with the clamps applied above the spur, cutting the bowel in two with the cautery and pulling the severed ends through the stab wounds. The longitudinal incision is then closed, with the upper end of the spur, from which the two limbs of the colostomy diverge, pulled up against the under-surface of the peritoneum.

The outstanding disadvantage of this procedure is the danger of contamination and possible wound infection from pulling the severed ends of the colon through the stab wounds. It is possible also to injure the blood supply to the cut ends of the bowel in pulling them through the small stab wounds. To obviate this the technic has been modified, and we think improved, by Alton Ochsner and his associates: a transverse incision is made down to the fascia, which with the peritoneum is incised longitudinally. The spur is formed in the same manner; clamps are applied above the spur; the bowel is divided completely with the cautery, and the limbs of the severed colon are brought out at the respective ends of the transverse incision. Closure is made with the spur in the same relation to the under-surface of the peritoneum.

XUM

Definite disadvantages are, however, associated with the Devine procedure; the final closure of the two openings is difficult and not without peril and the transverse colon is left with considerable deformity. If the artificial anus is the sole surgical step contemplated and is to be carried a year, these advantages may be justified.

Within very recent years we have observed in our own work that individuals with diverticulitis who have carried a colostomy for a long period, and having clinically recovered have had the stoma of the abdominal anus closed, have not infrequently presented themselves later with disturbing recurrences of their disease. The inflammatory reaction may reappear with consequent stenosis, a tumefaction in the sigmoid may descend into the lower pelvis and produce pain, apparently quiescent bladder symptoms present themselves anew or the patient may suffer from chronic obstipation. This experience has convinced us that an individual whose lesion has progressed to the stage where surgery is indicated should in practically all instances be given a colostomy as a preliminary step to be followed after a few months by resection of the segment of bowel involved. This new concept has been discussed with a number of competent observers and it will be interesting to record the present opinion of two of them. A personal communication from Dr. J. Arnold Bargen states: "About 15 per cent of the patients with recurrent attacks of diverticulitis develop obstructive or perforative symptoms severe enough to warrant surgery. Some years ago colostomy alone was performed and the segment of the bowel distal to the colostomy was left intact. Later on, the colostomy was closed without further surgery. In a few of these cases there was a recurrence of the diverticulitis. The difficulty about making a second colostomy were such as to make us feel that once the patient has come to the stage of colostomy, it is probably best to resect the diseased segment of the sigmoid." I find that Dr. John DeJ. Pemberton holds a similar opinion. "When obstructive symptoms, abscess or fistula develops, I feel that surgery is indicated. It is not feasible to make a direct attack on the involved segment because of the technical difficulties; instead, a colostomy should be established. Occasionally, because of the marked subsidence of the inflammation, one is tempted to close the colostomy without resecting the segment of bowel involved. I have done this on several occasions, often followed by recurrence of the inflammatory process. When the process has been severe enough to necessitate the establishment of a colostomy, it is far wiser to follow up later by an operation for removal of the affected segment of bowel than to close the colostomy."

It is for this reason that I have abandoned the use of the Devine colostomy in connection with diverticulitis. While the Mikulicz procedure on the transverse colon results in an intestinal stoma more difficult to regulate and while more attention must be paid to the nearby epidermis, the patient is not required to suffer this annoyance for an extended period and the more simple technique required to close this type of colostomy offers a distinct advantage.

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XUM

INFANTS OF DIABETIC MOTHERS*

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The problem of pregnancy complicating diabetes is controversial. It is controversial primarily in the four following respects: first, fetal survival; second, the characteristics of the infants of diabetic mothers; third, the clinical course of the mother, and, fourth, the need for special care of the infant and the mother.

Confusion and controversy have arisen in this problem because physicians are not always dealing with comparable cases. Some workers have studied predominantly diabetes occurring during the course of pregnancy, whereas others have studied pregnancies occurring during the course of well established diabetes. This discussion presents the facts and interpretations of the data derived from a series of patients of the latter type, 92 per cent of whom had well established diabetes prior to pregnancy and in only 8 per cent was the diabetes recognized during the pregnancy. The series was comprised of 125 consecutive pregnancies occurring in 119 different diabetic patients. They were treated between January, 1936, and July, 1942. Only patients carried successfully to the 24th week are included.

Maternal mortality was not the problem in this series. It has not been the problem in any series of diabetic mothers since the inauguration of insulin treatment. There was one maternal death, or a maternal mortality rate of 0.8 per cent. Seventeen of the fetuses in this series of 125 died, making the fetal mortality rate 12 per cent. The causes of death were as follows: macerated stillbirth 6, atelectasis 6, subtentorial hemorrhage 2, hemorrhagic disease in the newborn 1, defect of the skull 1, and erythroblastosis 1. Comparable fetal mortality[1-6] is reported from this level to as high as 35 per cent. If one includes the entire forty weeks of pregnancy, fetal mortality has been reported as high as 50 per cent, nearly every other infant of a diabetic mother being lost in early spontaneous abortion, miscarriage, stillbirth or neonatal death.

From these statements it appears true that when pregnancy complicates diabetes, fetal survival is significantly less than it is in the average child-bearing population and that there appears to be a factor in diabetes which is lethal so far as the infant is concerned.

CHARACTERISTICS OF THE INFANTS OF DIABETIC MOTHERS

Over-size was characteristic of the infants in this series of 125 cases. Eighty per cent of the number exceeded the expected weight for age when the standard of Potter and Adair[7] was used. Length as well as weight exceeded the normal. The largest infant was a premature weighing twelve pounds; the smallest infant, also a premature, weighed four pounds.

The weight of the infants of diabetic mothers in this series was influenced by three distinct factors: fat, edema and splanchnomegaly. The excellent nutritional level was evident on simple inspection.

Fat, however, is not the only cause for the weight, because edema which was sometimes visible and pitting or edema evidenced by weight loss greater than the average or by diuresis also greater than normal was characteristic of many of the 125 infants. The weight loss in 72 hours varied from the less than normal of one-tenth of an ounce to twenty-five ounces. Weight loss was twice as great in this group of infants as it was on the average among the infants of normal mothers delivered at the same time and treated in the same fashion at the Faulkner Hospital. The most edematous babies appearing acutely ill have not been weighed, so that the figures for loss of weight are actually lower than they should be. One such infant, however, was weighed at birth and twelve hours later. The loss in this seven-pound infant was exactly one pound in twelve hours.

Splanchnomegaly is the third factor contributing to the body weight. The enlargement was most striking and most frequently seen in the liver, spleen and the heart. It was less evident in the lungs and kidneys. Enlargement of the pancreas, thymus, and adrenal was not so consistently observed. In contrast to the enlargement of these structures, the brain was consistently smaller than normal.

Interesting and important pathological changes

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were noted by the five pathologists who have performed autopsies upon these infants. Microscopic evidence of hematopoiesis of the spleen and liver was observed in fourteen of the seventeen autopsied infants, atelectasis in thirteen, persistence of fetal glomeruli in six and hyperplasia of islets in five. Other pathologists, notably Hertig,[8] have reported glycogen infiltration of the enlarged heart of infants of diabetic mothers. Others[9, 10] have reported relative macrosomia, advanced bone age and more mature genital development than normal.

Physical examinations of the infants of diabetic mothers reveal a general appearance of post-maturity, long hair, and double eyelashes, atelectasis and enlargement of the liver and spleen. Both physical examinations and post-mortem examinations have shown the great frequency of congenital defects. Twenty-two of these 125 infants were known to have had twenty-six defects, so that one in six of the infants of diabetic mothers had a defect compared with one in fifty-five for infants of normal mothers. Interesting and important in this connection is the frequency of congenital anomalies in diabetics. In diabetic patients these anomalies are rarely gross or deforming. In the offspring of diabetics, they are more gross and more deforming. Twice in this series the defects were lethal, once in the neonatal period and once in later infancy.

The clinical behavior of the abnormal infants of our diabetic mothers is characterized chiefly by respiratory difficulty. These infants have atelectasis, shallow, rapid, incomplete breathing, cyanosis and apnea. The temperature is unstable. Fibrillary twitchings are common. Crying further increases the respiratory difficulty. Jaundice develops rapidly in nearly all.

Certain blood chemical determinations have been done; others of importance should be done. The cholesterol was on the average 50 milligrams; the carbon dioxide combining power of the blood varied from as low as 19 volumes per cent to 50 volumes per cent, and the average value for the non-protein nitrogen was 15 milligrams. Blood counts, serum proteins, Rh factors and hormone assays have been too infrequently performed to report at the present time.

The most characteristic chemical deviation from the normal was in the behavior of the sugar of the blood which at birth, whether capillary or cord, was usually higher than the normal of 40 to 60 milligrams. The range was from 20 to 250 milligrams. A precipitous fall is usually observed in four hours, followed by a spontaneous rise in eight hours. None of the infants of this series had clinical symptoms recognizable as those of insulin shock. One infant in an earlier group not included here had symptoms when the sugar of the blood fell to 9 milligrams. The mother was hypoglycemic during delivery.

The composite picture of the typical infant of the diabetic mother is, therefore, as follows: it is larger than the average. Except for the brain, it often has generalized splanchnomegaly. Hematopoiesis of the spleen and liver and islet hyperplasia occur. There appears to be a disturbance of water balance, shown by edema, weight loss, and diuresis. In spite of a mature, even post-mature appearance the clinical behavior is that of prematurity; difficult respiration and unstable temperature regulation as well as jaundice occur. The chemical characteristic most commonly observed to date is self-correcting relative hypoglycemia.

THE MATERNAL COURSE

The maternal course in this series of 125 consecutive pregnancies was largely abnormal. Forty-two per cent of the mothers had preeclamptic toxemia, hypertension and/or albuminuria otherwise not explained, and 25 per cent delivered spontaneously prematurely. Diabetic crises on the other hand were infrequent. One patient only, or 0.8 per cent, had chemical diabetic coma. One other patient only, 0.8 per cent of the series, had severe hypoglycemia. The symptoms and signs of toxemia in these diabetic mothers were mild. In this particular group none progressed to eclampsia, but mild toxemia and the premature deliveries were associated with a high fetal mortality.

The typical clinical course of abnormal pregnancies in diabetic mothers is as follows: in many there is first noted an abnormal gain in weight followed by visible edema, hydramnios, albuminuria and hypertension. With the development of hypertension, premature delivery or an intra-uterine death commonly occurs. If there is an intra-uterine death, it is followed by the disappearance of the clinical signs of toxemia, and later, often many weeks, delivery of a large macerated fetus.[11] Hydramnios with or without edema and without hypertension and albuminuria and intra-uterine death occasionally occurs. Premature delivery without signs of

XUM

toxemia may occur. Again, the infant appears mature, but, in spite of the appearance of maturity, usually dies of atelectasis within twenty-four hours.

Three possible causes for the fetal wastage have been studied in this group: first, congenital defects; second, the disturbance of the chemistry of diabetes; and, third, an imbalance of the hormones of pregnancy.

Congenital defects contributed, as previously stated, to one of the seventeen fetal deaths, and to one additional infant death. Congenital defects, therefore, were most certainly not the chief or contributory cause of the deaths in the sixteen other fetal fatalities occurring in the third trimester or neonatal period.

The disturbed chemistry of diabetes has been blamed for fetal loss, and it has been almost universally stated that if diabetes is adequately controlled the survival of the fetus can be assured. Disordered carbohydrate, protein and fat metabolism have been blamed separately and together.

Although acidosis with a shift of the hydrogen ion concentration of the blood to the acid side could theoretically affect the fetus adversely, it was not a factor in this series, for there was only one instance of diabetic coma in 125 cases and it was associated with the survival of the fetus. Interestingly enough, this same mother had a previous stillbirth without complicating diabetic coma. None of the seventeen mothers whose fetuses died had coma or acidosis as shown by carbon dioxide content determinations of the blood or urinary acetone bodies.

Maternal hypoglycemia in our experience was also not associated with fetal death. Accidentally one patient in this series received 270 units of protamine zinc insulin. In spite of glucose administered intravenously, she was hypoglycemic even to the point of unconsciousness for many hours. Later, however, she was delivered of a healthy infant.

Uncontrolled carbohydrate metabolism or hypoglycemia might deplete the placenta of glycogen, but there was no chemical or clinical evidence of this in the seventeen fatal cases, ten of whose mothers were under hospital treatment at the time of the fetal death.

A shift in fluid balance could accompany fluctuations of the level of the sugar of the blood. However, this was not our clinical experience. Our severest case of hydramnios and of generalized edema occurred in a patient who, having lost her first infant, was hospitalized in the latter part of the second and the entire third trimester. She insisted upon five blood sugar determinations daily, all of which were constantly normal, and yet, in spite of perfect control of diabetes, she had the most marked disturbance of water balance in the entire group.

Disordered protein metabolism measured by nitrogen excretion did not occur, for the urinary nitrogen levels of the mothers were consistently low.

Since neither congenital anomalies nor the disturbed chemistry of diabetes in our experience accounted for late fetal death, we turned to the study of the hormones of pregnancy. The 125 cases reported here all had determinations for chorionic gonadotropin, 51 had determinations for pregnanediol and 27 for estrogen. (A detailed report of these cases is to be published in the *Journal of Clinical Endocrinology*). The cases were classified as normal if the level for chorionic gonadotropin between the twenty-fourth and thirty-fourth week lay below 200 rat units per 100 cc. of blood and if the pregnanediol excretion was the minimum of normal according to the curve published by Venning and Browne. In only a few instances did estrogen values influence the classification. Forty-one of the 125 cases were classified as normal on the basis of hormone assays and 84 were classified as abnormal largely upon the same basis. From this, it is evident that a high incidence, two-thirds of these patients, had a measurable imbalance of the hormones of pregnancy.

The eighty-four abnormal cases were divided into two groups. The first twenty-seven were untreated, and the last fifty-seven had hormone therapy in an effort to restore the balance of the sex hormones to normal.

The fetal survival in the forty-one cases classified as normal on the basis of analyses of sex hormones was 95 per cent, comparable with the fetal survival of the average child-bearing population. The fetal survival of the twenty-seven abnormal and untreated cases was 60 per cent. The incidence of toxemia in the forty-one normal cases was 2 per cent; in the twenty-seven abnormal untreated it was 52 per cent. The incidence of prematurity in the forty-one normals was 0; in the twenty-seven abnormals it was 40 per cent. Since the patients with the normal hormonal balance had a normal clinical

course and excellent fetal survival and since the abnormals had a distinctly abnormal clinical course and high fetal wastage, the next step was an attempt to correct the sex hormonal imbalance to see if prematurity could be lessened, toxemia modified, and fetal loss prevented.

Fifty-seven of the eighty-four abnormal cases have received such sex hormone therapy. In this group, fetal survival is 92 per cent; prematurity fell from 40 per cent in the untreated group to 18 per cent, and, when it occurred, it occurred later in the course of pregnancy than in the abnormal untreated group. Toxemia, which was invariably mild, appeared to be modified.

From an intimate study of these patients, rules for management of the fetus and the diabetic mothers have been derived. These are post-natal, delivery, and pre-natal rules. The post-natal rules are: first, oxygen incubation; second, heat; third, dehydration, and, fourth, glucose only if the blood sugar is falling at the end of eight hours.

The time and type of delivery are the obstetrician's choice. Premature delivery of the abnormal hormonal group is the rule. Cesarean section was performed upon 63 per cent. Many of our patients are young and primiparous and Cesarean section seemed the best way to accomplish premature delivery. Sterilization advocated after the second successful pregnancy was the reason for operative delivery in others.

Cesarean sections are done under spinal anesthesia and without sedation. Sedation and late anesthesia are administered in normal deliveries, but are kept at minimum levels, not because of maternal diabetes but because of the fetal respiratory difficulties.

The prenatal care includes the care given to any pregnant woman, adequate treatment of diabetes and hormonal therapy if indicated. The diet should be liberal in carbohydrate, up to 200 grams, 2 grams of protein per kilogram of body weight and 30 calories per kilogram of actual increasing body weight. Salt is restricted after the twenty-fourth week and sodium bicarbonate prohibited. Multiple small doses of insulin are the rule. Early in pregnancy there is a low renal threshold. With almost normal blood sugars, the daily excretion of sugar may amount to 100 grams. This not only represents a great loss of calories but also favors the development of ketosis. Glycosuria is corrected by combined protamine zinc insulin and small doses of crystalline insulin before breakfast, before lunch and before the evening meal.

Hormonal treatment at present consists of intramuscular stilbestrol and intramuscular proluton. The quantity of stilbestrol is regulated by the level of the chorionic gonadotropin. It should be increased to the point where the chorionic gonadotropin remains below the level of 200 rat units per 100 cc. of blood. The progestin therapy is kept at a minimum because of cost. From choice it is increased in an effort to bring the level of pregnanediol excretion to normal according to the standard of Venning and Browne.[11] In spite of massive doses of stilbestrol, nausea and vomiting have not occurred. One fatal chemical hepatitis which may or may not have been due to stilbestrol did occur.

A follow-up of the 108 surviving infants to date shows that two infant deaths occurred. One was due to a giant cephalomeningocele and the other to septicemia. The obesity and the edema have not persisted. There have been no blood dyscrasias. There have been no instances of dwarfism or obliteration of the medullary canal which might have been expected because of the use of large doses of stilbestrol. There have been no genital anomalies in the group. None of the infants has developed diabetes to date.

A follow-up of the mothers showed no increase in the severity of diabetes. At the present time, we appear to have some evidence of a decrease in the severity of the disease in those who received sex hormone therapy. This is a very difficult point to determine accurately because with the added responsibility the diabetic mother tends to take better care of the disease and with stricter adherence to treatment her insulin requirement decreases.

DISCUSSION

In this series of 125 cases a close correlation exists between the incidence of fetal death, the imbalance of sex hormones and maternal morbidity. Fifteen of the seventeen fetal deaths occurred either in relation to prematurity or toxemia and in relation to sex hormonal imbalance. The former was associated with atelectasis and the latter usually with macerated stillbirth.

The reason for the great frequency of the imbalance of the sex hormones in diabetic pregnancies is not clear. It may be one of the manifestations of

XUM

the complex endocrinal disease which diabetes is. In certain periods of diabetes we see clinical and chemical evidence of an excess of pituitary activity; in other stages of the disease, clinical and chemical evidence of hypofunctioning of the pituitary. Whether or not this contributes to the pregnancy problem at present we are not able to state. Production, metabolism or excretion of sex hormones may be affected by the disease or its sequelae.

Three possible explanations for the congenital defects occur. First, the mechanism may be on the basis of heredity; second, hormonal imbalance; and, third, vitamin deficiency. Similar lesions have been produced in experimental animals by vitamin B deficiency,[12] and congenital anomalies have been produced by disturbance in the sex hormone regulation.[13] More and more, there has been an intimate relationship between vitamins and hormones. So far as heredity is concerned, we do have evidence of congenital defects among diabetics as well as their offspring.[14]

The weight of the infant, islet hyperplasia, water imbalance, glycogen infiltration of the fetal heart, may possibly be explained on the basis of hyperglycemia which, however, could not account for splanchnomegaly, hematopoiesis, or the positive Aschheim-Zondek reaction observed in the female infants of diabetic mothers.

The size of the infant, water imbalance, hematopoiesis, the Aschheim-Zondek reaction, the glycogen infiltration, and splanchnomegaly could be the direct result of the disturbance of the sex hormones. It is not illogical to believe that both diabetes and sex hormone imbalance play a part in producing the infant which is characteristic of the diabetic mother.

CONCLUSIONS

The total fetal survival for pregnancy complicating diabetes in the past has been significantly less than that of the average child-bearing population. If all trimesters are considered, it has been as low as 50 per cent, and if the third trimester alone is considered, as low as 65 per cent. The infant of the diabetic mother has certain characteristics. These are, first, over-size, which in a series of 125 infants reported here was due to obesity, edema and splanchnomegaly; second, hematopoiesis resembling that found in erythroblastosis; third, hyperplasia of islet tissue, and, fourth, self-correcting hypoglycemia. Abnormal infants behave like premature ones having atelectatic breathing, periods of cyanosis and apnea, instability of temperature regulation and jaundice.

The clinical course of the diabetic mother is often abnormal. In a series of 125 cases 40 per cent had toxemia, and 25 per cent delivered prematurely. This behavior does not appear to be in any way correlated with gross deviations of the diabetic course since only 0.8 per cent of these cases had coma, and only 0.8 per cent had severe hypoglycemia. Coincident, however, with an imbalance of the sex hormones of pregnancy is the abnormal obstetrical maternal course and the high fetal mortality rate. It is suggestive that the mechanism is a progestin-estrin deficient metabolism and that the rise of chorionic gonadotropin and fall of pregnanediol are relatively practical tests which predict an abnormal clinical course for the mother and for the infant. Correction of the hormonal imbalance lowered the incidence of prematurity, modified toxemia, and resulted in a rise of late fetal survival from the uncorrected level of 60 per cent to 92 per cent.

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PREGNANCY AND DIABETES

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Pregnancy is always of interest and particularly is this true when it involves the young diabetic who only 20 years ago was doomed to a meager existence for only a brief span of life and in whom any complication was apt to lead to coma and death. In spite of this fact, pregnancy is such a prevalent condition that even in this group some data were assembled. All of us have heard the saying that babies of diabetic mothers were apt to be unusually large at birth. Furthermore, we knew also that the fetal survival rate was poor and that not infrequently the mother had difficulty which at times caused death. Since insulin was introduced the maternal mortality has improved markedly, and I suspect the same is true of infant mortality, but pre-insulin statistics are too meager for accurate comparison. Now the diabetic child, instead of living only one year, has a reasonably good life expectancy and is maturing, marrying and reproducing. Young women in the childbearing period develop diabetes and carry on as before. Doctors no longer counsel against pregnancy, knowing that the life of the mother is relatively safe. For these reasons more pregnancies occur in this group of patients and more data are being assembled.

Nevertheless, the fetal mortality rate remains high, as White has pointed out, even when the diabetes remains well controlled. At the Joslin Clinic a study of these patients was undertaken. At first an attempt to improve fetal mortality was made by early delivery to avoid the mortality incident to death *in utero* at or near term. Quick delivery by Cesarean section was recommended with some apparent benefit. Nevertheless the fetal survival rate remained low, and need for a new approach was apparent. With the diabetic and nutritional status of the patient satisfactory and the results poor, it seemed that another factor must be at fault. Some endocrine imbalance might be significant. Studies of the hormone concentration of the blood revealed that patients could be divided into two groups. In one group normal values for the concentration of chorionic gonadotropin in the blood was associated with a fetal survival rate of 92 per cent. The other group showed elevation of the hormone, and here the fetal survival rate was only 40 per cent. Stillborns, miscarriages and monsters occurred often.

The next step was in the direction of therapeutics. Massive doses of stilbestrol and progesterone were administered until the gonadotropin fell to normal and remained there. The results were gratifying. Now three groups were represented and the results were consistent. The first group consists of diabetics with normal hormone in whom the fetal survival rate is 92 per cent. The second group has elevated hormone, and the fetal survival rate is 40 per cent. The third group had elevated hormone which was reduced by treatment, and here the survival rate rose again to 90 per cent.

Now these results are excellent and their consistency encourages belief in them. Yet confirmation was not forthcoming, and doubt was many times expressed by eminent men who, however, had made no studies to refute them. In the fall of 1941 I prevailed on Dr. R. J. Main, professor of physiology at the Medical College of Virginia, to make the hormone assays for me. This paper is simply a preliminary report based on the results of the few cases we have tested so far. As you know, pregnant diabetics are not plentiful. Furthermore, during these war times rats are scarce and expensive. Labor is at a premium, and our own time is filled with daily duties that allow little extra for investigation.

The tests are made by collecting blood from the patient, precipitating the hormone, and injecting varying amounts twice daily into immature female rats for 5 days, and then killing the rats and weighing the uterus to determine the amount of serum necessary to enlarge the uterus to a certain weight. So far we have made no attempt to influence the hormonal balance, but have tried merely to determine whether or not it is an index of fetal survival rate. We have tested 9 cases only which I shall list briefly.

Case No. 285.—A 24 year old woman with diabetes of 7 years' duration was seen in the third month of pregnancy. Pregnancy was uneventful and the diabetes remained reasonably well controlled. There was occasional headache and albuminuria in

the 7th and 8th months and considerable edema in the 8th and 9th months, so that labor was precipitated by rupture of the membranes about 3 weeks prematurely. The hormone determination late in the 7th month was normal, and a healthy baby girl weighing 9 pounds was delivered without incident. The patient left the hospital in 9 days.

Case No. 323.—A 21 year old girl with diabetes of 2 years' duration and one divorce and one separation and one attempt at suicide behind her came in during the 2nd month of pregnancy.

The pregnancy was uneventful save for a sudden spell of severe lumbar pain at the end of the 6th month and a failure of the uterus to enlarge properly after this. In view of the lack of uterine enlargement labor was precipitated late in the 8th month by rupture of the membranes. Delivery of a 3 pound girl, who had the development of a full term infant, was done without difficulty, but the baby died in 11 hours in spite of oxygen. Autopsy showed questionable erythroblastosis fetalis. A very large placental infarct was found which may have accounted for the small size of the infant by slow starvation. The hormone assays were normal in the 5th and 7th months, but a placental infarct sufficiently large to reduce markedly the size of the fetus might also reduce the blood value of the placental hormone in question. The patient was in the hospital 7 days.

Case No. 450.—A 29 year old woman with diabetes of one year's duration came in during the 2nd month of pregnancy. Pregnancy the preceding year, when diabetes was found, resulted in a stillbirth at term 4 months prior to the present pregnancy which was uneventful.

The hormone test was normal in the 9th month of pregnancy and she was delivered of a normal boy of 9½ pounds after the spontaneous onset of labor. The hospital stay was 6 days.

Case No. 493.—A 37 year old woman with diabetes of 8 years' duration was seen in the 2nd month of pregnancy. This was the third pregnancy since the onset of diabetes. The two previous resulted in stillbirths of large babies (10 and 14 pounds) at term. Pregnancy was uneventful save that at the time we wished to precipitate labor the cervix seemed too hard. During the next week fetal death occurred and spontaneous labor occurred about two weeks after the expected date with delivery of a macerated fetus weighing 8¾ pounds. The hormone values were normal in the 2nd and 7th months but elevated in the 9th month. Latent syphilis with a doubtful Wassermann was treated for the last 6 weeks of pregnancy in spite of 64 injections of arsenic and bismuth in previous pregnancies. The patient left the hospital in 4 days.

Case No. 505.—A 20 year old girl with diabetes of 15 months' duration was seen in the 8th month of pregnancy with a story of a stillbirth at 7 months in pregnancy the year before. She had diabetic coma three months before the present pregnancy. The hormone was normal two weeks before term and delivery of a normal girl weighing 6 pounds 2¾ ounces was uneventful, the patient leaving the hospital in 9 days.

Case No. 640.—A 37 year old woman with diabetes of 4 years' duration was seen first just 3 weeks before delivery. She had been in coma 4 weeks before this pregnancy. The hormone was normal, and pregnancy resulted in the birth of a normal boy weighing 7 pounds 10½ ounces. The stay in the hospital was only 4 days.

Case No. 668.—A 26 year old woman with diabetes of one year's duration was seen first in the 2nd month of pregnancy. She had been in coma 9 months previously. The hormone values were normal at 4, 6, and 8 months. The pregnancy was smooth and resulted in the birth of a normal girl weighing 8 pounds 15 ounces. The hospital stay was 8 days.

Case No. M.C.V. 26025.—A 45 year old woman with diabetes discovered in this pregnancy was first seen in the 8th month. Pregnancy passed without untoward signs and the gonadotropin was normal. A healthy 7½ pound girl was delivered at term.

Case No. M.C.V. 10510.—A 37 year old woman with diabetes of two years' duration was seen in the 4th month of an uneventful pregnancy. Hormone level was normal at 6 months but an unusually high normal value was noted in the 9th month. Death *in utero* occurred 3 days before spontaneous delivery of a macerated fetus weighing 11 pounds 8 ounces.

Of these 9 cases, 7 had normal hormone values. Of these, 6 have healthy babies and the 7th one lost hers apparently due to a condition unrelated to the diabetes. Of the 2 remaining cases, one had an abnormally high level of choronic gonadotropin

and was delivered of a macerated fetus. In the other case, the hormone level was unusually high, although we hesitate to classify it as abnormal until our normal is better established. This pregnancy also ended in the birth of a macerated fetus. This work, although meager, corroborates the findings at the Joslin Clinic.

Medical Arts Building.

You Can Walk Without Legs.

Teaching by example is the most effective means of restoring the courage and self confidence of the war wounded who have lost a limb in the present conflict, J. P. McEvoy, New York, asserts in *Hygeia, The Health Magazine* for August. Most men who think that they are permanently incapacitated as the result of the loss of an arm or leg find new hope in the fact that others who have suffered a similar disaster have, by the use of an artificial limb and a determination to overcome their handicap, become self reliant and their injury almost unnoticeable.

Explaining the importance of this problem among the war wounded, Mr. McEvoy declares that while "actual figures are a military secret, it is unofficially admitted that two thirds of our war wounded now coming back from the battle zone are 'amputees'. The biggest percentage of these have lost one leg, usually the right one. There are two or three times as many leg casualties as arm, the result mostly of the fiendishly perfected land mines in this conflict.

"It is only natural for a boy who has lost a limb to feel that this is a rare disaster, but there were 4,403 'amputees' from the last war, and even in normal times as many as 10,000 lose arms or legs annually in this country by automobile and railroad accidents and infectious diseases. All told, there are approximately 350,000 legless or armless people in the United States. . . ."

One of the largest of the three hundred artificial limb companies in the United States, which makes a thousand artificial limbs a month, has organized a baseball team of customers who have lost either an arm or a leg and yet play regular benefit games in and around New York, the author continues, pointing out that this year's schedule was somewhat curtailed because so many members are employed in defense industries that they have only a limited time for practice.

"It is not generally known," he states, "but Great Britain's air raid victims who have lost limbs are provided with new artificial ones free of charge by the Ministry of Pensions—and nearly always they go back to the same work they left. In the arm training school at Roehampton, patients get an intensive course in carpentry, printing, sign writing, decorating, gardening. Women are taught to knit and do housework with their artificial arms and are trained for factory work.

"The hand is detachable at the wrist and into the socket can go whatever tool is needed for the job in question. An engineering foreman perfected an artificial right hand with which he can select a cigarette from the package, take a match from a box, strike it and light up. This done, he can take off the hook and punch a 60 pound wooden block with his steel stump. . . ."

Accounts such as this of those who have been able again to take their place in ordinary affairs of life, or better still, actual demonstration by them of their unimpaired ability to work and to play, can do much for the morale of those who have recently suffered amputation, Mr. McEvoy says.

XUM

THE TREATMENT OF URETERAL CALCULI*

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Ureteral calculi with few exceptions originate in the kidney, and in many cases pass readily through the ureter. The normal constrictions of the ureter present natural barriers in the passage of stone, and it is at, or near, these areas that stones are usually lodged. Pathological strictures or spasm of the ureter may account for the arrest of calculi in any portion of the ureter. When the stone has been arrested in the ureter for a time, varying from a few hours to several days, the spasm may relax or the ureter may become dilated from above sufficiently to permit the stone to continue down the ureter. This process may be repeated several times before the stone is eventually expelled. When the stone fits very tightly in the ureter or when the spasm persists, the ureteral wall becomes edematous, often completing the occlusion of the channel. The stone is then impacted and rarely moves further unless assisted. If this impaction is not promptly relieved, inflammatory changes take place in the ureteral wall, followed later by fibrosis and often permanent injury to the ureter. Sufficient drainage may occur around the stone to preserve the kidney function. In long standing cases grooves are sometimes noted in the stone. In most cases stones that have existed for several weeks are accompanied by some dilatation of the ureter and kidney pelvis with diminution of the renal function. Not infrequently the kidney is irreparably damaged or destroyed. In our series nephrectomy was required in six patients. Most of the arrested ureteral calculi, about 75 per cent, pass the two upper constrictions and become arrested in the pelvic segment. The ureterovesical area is the narrowest and most resistant portion of the ureter.

The Relief of Pain.—The first consideration in a case of kidney colic is the relief of pain. This is usually accomplished by the administration of narcotic and anti-spasmodic drugs and the application of heat. Morphine is the most dependable drug for the relief of pain and an adequate dose should be given. An adult should be given from ¼ to ½ grain. Antispasmodic drugs such as atropine, calcium gluconate and depropanex are very helpful in relaxing the smooth muscle of the ureter. When given with morphine the effect of the narcotic is greatly prolonged. The best method of applying heat is to immerse the patient in a tub of water as hot as it can be tolerated. If this is not practicable, hot water bottles or heating pads to the loin and abdomen are very helpful. If the stone passes or changes position the attack will subside. If the obstruction persists further medication is necessary within a few hours. Occasionally pain is almost continuous until the obstruction is relieved by operation or by passing a catheter beyond the stone. If the patient has no fever and the pain can be controlled it is safe to wait a few days with the hope that the stone will pass. If the stone is not recovered after three or four days, or if acute tenderness develops in the costavertebral area a cystoscopic and x-ray study is advisable. The onset of fever requires immediate cystoscopic intervention to prevent irreparable damage to the kidney. If the patient recovers from the attack and has not passed a stone, a urologic examination should be made. Occasionally a stone becomes quiescent in the ureter and gradual dilatation and destruction of the kidney progresses with little or no discomfort.

Methods of Removing the Stone.—It is possible now to remove many ureteral calculi by cystoscopic procedures. This is accomplished most frequently by dislodging the stone and dilating the ureter with catheters and bougies aided by lubrication and the administration of relaxing drugs. Frequently two or more catheters may be passed by the stone and left in place a few hours for drainage of the kidney and relaxation of the ureter. When they are removed, the stone often comes away with them or is passed shortly thereafter. Many special instruments have been devised to aid in the removal of stones, some to aid in increasing the caliber of the ureter, and others to grasp or entangle the stone and extract it from the ureter. The usefulness of these instruments is limited. They are usually semi-rigid, hence their introduction into the ureter is not without danger. Reports of ruptured ureters have increased

*From Urological Service—Hospital Division of Medical College of Virginia.

since their introduction. The ureter in one of our patients was ruptured. Recovery followed incision and drainage. A few are helpful accessories in the hands of skilled cystoscopists. A sizeable proportion of ureteral calculi, approximately twenty per cent according to some writers and decidedly more in the opinion of others, should be removed by ureterolithotomy. The choice of procedure depends upon many factors, varying from the size and location of the stone to the temperament of the patient. In our series of 238 patients 81 stones were removed by ureterotomy, the others passed spontaneously or were removed by cystoscopic methods. In many instances the patient was from a distance and the difficulty of repeated visits to the hospital for dilatation was a deciding factor in determining the procedure to be used.

Size and Location.—Some authors attempt to designate the upper limit in size at which a stone may be removed by cystoscopic procedures, some stating that a stone larger than a centimeter in its greatest dimension should be removed by ureterolithotomy, while others feel that attempts should be made to remove stones twice as large by cystoscopic manipulation. So many other factors enter into the problem that such a standard is of little value. A small spastic ureter, a dense unyielding condition of the intramural segment, inflammatory reaction around the stone, and distortion of the base of the bladder are occasional handicaps that are difficult to overcome. In such cases, it is often to the patient's advantage to remove the stone by open operation. The location of the stone when first seen is of considerable importance in deciding upon the method of treatment. We agree with Foley that any stone larger than five millimeters in diameter impacted above the point at which the ureter crosses the iliac vessels should be removed by ureterolithotomy without delay. In such case the stone has yet to traverse the narrowest portion of the ureter, and if it becomes impacted near the bladder it is more difficult to expose by open operation. On the other hand, removal of a stone from the upper portion of the ureter is one of the easiest and safest urological operations. Operation in this area becomes imperative if there is evidence of infection or if the stone is not readily passed by an ureteral catheter.

The Duration of Symptoms.—The duration of symptoms is also important. If the history and examination indicate that the stone has remained in the ureter for a long time, cystoscopic methods are less apt to be successful. The segment of ureter surrounding the stone is often thickened and inelastic, and in some cases spicules of stone are imbedded in the ureteral wall. It is correctly stated that many stones of long residence in the ureter contain grooves which permit drainage and protect the kidney. It is equally true that stones lying silently in the ureter may cause complete destruction of the kidney. If there is evidence of urinary stasis or diminution of kidney function, prompt removal of the stone is the safest procedure. We found in our patients that the degree of kidney impairment was directly proportional to the duration of symptoms and the most rapid and satisfactory recoveries were obtained in those whose symptoms were of short duration.

Infection.—Mild degrees of infection may be controlled by one or more indwelling ureteral catheters while efforts are made to extract a stone, but if the infection is severe, with high fever or chills and fever, immediate operation is necessary. If the stone is accompanied by severe infection with rapid pulse rate, abdominal distention and acute lumbar tenderness, nephrostomy or nephrectomy may be the operation of choice. In such cases it should be remembered that a severely infected kidney will recover if adequate drainage is instituted. In some cases a small stone will pass unaided while nephrostomy drainage is in progress; if not, it can be removed later under more favorable conditions.

Anuria.—Anuria occurs in bilateral ureteral calculi, when the only kidney is blocked, and when the uninvolved kidney ceases to function because of obstruction of the opposite ureter. This last condition is spoken of as reflex anuria and is probably caused by the entire burden of excretion being thrown suddenly on a kidney whose functional capacity is insufficient for the task. It is doubtful if reflex anuria ever occurs when the uninvolved kidney is entirely normal. Treatment in these cases is influenced to some extent by the length of the time the anuria has existed. If the stone is small and recently impacted, excretion of urine may be re-established by the passage of one or more catheters by the stone. If, after the catheters are removed, the stone is not passed within a few days, or if there is evidence of infection or a recurrence of anuria, ureterolithotomy should be done immediately. If the stone is of sufficient size to make its expulsion from the ureter doubtful, or if the anuria is accompanied by fever,

XUM

immediate operation is the safest procedure. In cases of prolonged anuria with evidence of uremia or sepsis, nephrostomy should be done for drainage and protection of the kidney. The stone, unless it can be reached through the kidney incision, may be removed when conditions are more favorable. Bilateral ureteral calculi are always a serious problem. If possible ureteral catheters should be passed beyond the stones and left in place for drainage. The stones may then be removed at separate operations a few days apart, or one stone if small may be removed by cystoscopic methods following operation on the opposite side. The operative risk is greatly increased in bilateral operations. They should be avoided unless infection or anuria require immediate drainage of both kidneys.

Sex.—Cystoscopic procedures are better tolerated by women, and consequently probably a greater percentage of stones in females can be removed by this method than in the male. The cystoscope can be passed readily by the side of indwelling ureteral catheters, making it possible to pass a greater number of catheters by a stone in the female ureter. Stones impacted in the lower end of the ureter may be removed through a vaginal incision. When the stone can be palpated through the vagina, this is the best means of approach. The operation is exceedingly simple and safe. The fear of ureterovaginal fistula is in my experience unfounded.

Age.—Fortunately ureteral stones are not seen very often in children and elderly people. In children the various instruments devised for the extraction of stones are not applicable because of their size. Often small stones will pass following dilatation of the ureter with one or two small catheters. Elderly people do not tolerate repeated instrumental efforts to dislodge ureteral calculi. Only small stones that give promise of easy passage should be treated by this method. Frequently enlargement of the prostate will prevent cystoscopic efforts at removal. Such patients should be carefully studied and the gentlest method possible should be used.

The Patient's Attitude.—The patient's attitude toward the treatment must be considered also. Some patients are very fearful of surgical procedures and will tolerate any number of cystoscopic efforts rather than submit to operation. There are others who are very intolerant to pain and react to cystoscopic manipulation very badly. If it is necessary to subject a patient to general or spinal anesthesia several times within a few weeks to manipulate a stone, it is far better that operation be done in the beginning. Economic factors also enter into the choice of procedures, especially with patients who have come some distance for treatment. When it seems probable that several cystoscopic treatments will be necessary to remove the stone, an operation will cause less discomfort and an earlier recovery.

CASE REPORTS

During the decade ending January 1, 1941, there were 238 patients admitted to the Hospital Division of the Medical College of Virginia with symptoms that indicated ureteral calculi. Of this group ureteral calculi were demonstrated in 227. In some of the remaining eleven there was cystoscopic evidence that a stone had recently passed. A stone was recovered in 196 instances and 29 patients did not return to the hospital following the initial cystoscopic examination.

In this series of patients the stone was found twice as often on the right side as on the left. One hundred and fifty-three of the patients were male and 85 were female. Fifty of the patients were colored (Table 1).

CASES

PLATE 1

	Total	Male	Female	Colored	White
1940	33	24	9	5	28
1939	40	25	15	12	28
1938	30	20	10	7	23
1937	25	11	14	3	22
1936	24	14	10	6	18
1935	23	17	6	6	17
1934	18	9	9	5	13
1933	13	7	6	3	10
1932	15	13	2	2	13
1931	17	13	4	1	16
Total	238	153	85	50	188

Thirty-nine (39) patients had hydronephrosis on the side of the obstruction and 39 also had demonstrable stones in both kidneys. Of this group with complicating kidney pathology nephrectomy was necessary in six. In the group of 196 from whom the stone was recovered, 52 passed the stone spontaneously or following cystoscopic examination, and the stone was recovered by additional cystoscopic manipulations in 54. In nine instances the stone was pushed into the kidney pelvic and removed by pyelotomy. A ureterotomy was done in 81 cases. In the majority of these immediate removal of the stone

was considered necessary because of infection.

A majority of the patients were between 20 and 40 years of age, the youngest being ten and the oldest 69 (Table 2). Pain was the predominating

PLATE 2

Age group	No. of cases
10-20	7
20-30	76
30-40	58
40-50	47
50-60	24
60-70	16

symptom in 211, 62 complained of hematuria, 49 stated that they had had chills, and 38 complained of having had fever.

Seven patients died in the hospital; two from uremia, four from pneumonia and one from pulmonary embolus. The following brief histories of these patients indicate that death was caused in most cases by delay in receiving surgical treatment.

Case No. 1: W.B., a white male, age 65, was admitted to the hospital in January, 1939, because of a history of pain in the right side of two months' duration. He had had a transurethral resection in 1937, and in 1938 he entered the hospital with bilateral renal stones, and one in the right ureter which was removed. On his last admission he was found to have three stones in his left kidney, one of which partly obstructed the uretero-pelvic junction. His NPN, which was 75 milligrams per 100 c.c of blood on admission, fell to 30 milligrams about a week later and a left pyelotomy was done and the stones were removed. His renal function had never been more than 50 per cent of normal. On his eighth post-operative day he had a chill, developed broncho-pneumonia and died two days later.

Case No. 2: H.C., a colored male, age 20, was first seen in 1935 because of a ruptured bladder, the result of a fractured pelvis. A suprapubic cystotomy was done at that time. The patient recovered from this accident and the suprapubic wound healed within three months. Following discharge from the hospital he did routine farm work, but suffered occasionally from severe renal colic, mostly on the left side. He returned in 1936 in an acute attack of renal colic and was found to have bilateral ureteral calculi, complicated by a bilateral pyelonephritis. His phenosulphothalein elimination was 7 per cent in two hours and his nonprotein nitrogen was 236 milligrams per 100 c.c. of blood. A right ureterotomy was done and a stone removed and a month later a left ureterotomy was done. The patient never regained consciousness after the second operation, but hung on in uremic coma for 36 hours and died. Autopsy showed bilateral pyelonephritis and pulmonary edema.

Case No. 3: C.H., a white male, age 57, was admitted to the hospital in 1936 with a four-year history of lumbar pain, hematuria, frequency of urination and passage of gravel. On admission his phenosulphothalein elimination was less than 25 per cent in two hours, and his nonprotein nitrogen was 40 milligrams per 100 c.c. of blood. He was found to have bilateral renal and ureteral calculi and a large stone in the bladder. The stone from the upper right ureter was removed after a cystoscopic examination revealed its location and a perinephritic abscess was drained. Some time later the stone was removed from his bladder because of constant pain and tenesmus. A week following this last operation he developed pneumonia and died.

Case No. 4: J.C., a white male, age 65, came to the hospital in 1935 with a calculus in the right ureter, complicated by pyonephrosis of the right kidney and bilateral renal calculi. A cystoscopic examination was done and a catheter was passed beyond the obstruction in the right ureter and left in place for drainage. The patient was found to be in mild cardiac failure, and after proper digitalization, a ureterotomy was done and the stone removed. His dye elimination was 17 per cent in two hours and his NPN was 42 milligrams on admission. Following operation his NPN rose to 72 milligrams, he developed acute pyelonephritis and died in uremia on his sixth post-operative day.

Case No. 5: J.S., a white male, age 42, gave a history of having had a bladder stone removed in 1930, and a left nephrectomy in 1934 because of a non-functioning infected kidney. The record showed this kidney to have marked lipomatosis and dilatation of the renal pelvis and ureter. In 1935 he returned to the hospital complaining of pain in the right flank. His renal function was normal. A stone was found in the right ureter and several small stones in the renal pelvis. The stone was removed from the ureter. During his post-operative course he developed cystitis, pyelonephritis, and finally pneumonia and died. Autopsy revealed a dif-

XUM

fuse bronchopneumonia, renal calculi, pyelonephritis, and a perinephritic abscess.

Case No. 6: R.G., a white male, age 57, was admitted to the hospital because of acute pain in the right flank, pyuria and hematuria. His kidney function tests were within normal limits. An x-ray examination revealed a right ureteral stone, and a cystoscopic examination was done. A retrograde pyelogram revealed the stone to be located now in the kidney parenchyma. No further operative procedures were contemplated at this time. The patient complained of vague right upper abdominal pain which was suspected to be gall-bladder disease. About 48 hours after the cystoscopic examination the patient suddenly went into shock and died within 20 minutes. A pulmonary embolus was found at autopsy. There was also a stone in the right kidney pelvis, hydronephrosis, hydroureter and an aneurysm of the right renal artery.

Case No. 7: J.D., age 51, a white male, was admitted to the hospital in 1933 with a high fever and acute pain in the right flank. A cystoscopic examination was done and a stone found in the right ureter. This was removed by ureterotomy immediately because of the high fever. There was no improvement in the patient's condition and the fever remained high. Two days later the patient died of a bronchopneumonia, which had been diagnosed the day of the operation. A renal function test on admission showed only 15 per cent of the dye eliminated.

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Medical Arts Building.

The Association of Military Surgeons of the United States

Will meet in the Bellevue-Stratford Hotel, Philadelphia, for a three-day session on October 21.

The symposium on war medicine will be of vital and direct interest to the health and welfare of the men in the armed forces, to physicians, research specialists and scientists everywhere, as well as to the general public. It is expected that the meeting will bring together 2,000 doctors, many of whom have been in active combat with the servicemen in every camp and base throughout the country and on all the fighting fronts.

Medicine's methods of meeting the new and complicating factors brought on by mechanized modern warfare will also highlight the sessions. There will be reports and discussions on such new matters as air evacuation, parachute injuries, the physiological aspects of high altitude flying and dive bombing, tropical medicine, blast injuries, amphibious operations, submarine warfare, immersion and temperature extremes, neurosurgical problems and the whole field of rehabilitation. The first night will be known as "Army Night" and the second as "Navy Night".

The convention, with its score of exhibits and meetings, will occupy all available floor space in the hotel. The program will list, besides general sessions, a series of forum lectures and teaching panels, as well as a great number of film showings.

THE PROBLEM OF THE CIVILIAN MALADJUSTED*

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The causes for war are many and diverse; yet, there are a few that must be considered when any attempt is made to treat community problems that arise during wartimes, or subsequent to peace. Man has killed man since the beginning of time—thus there is no novelty to this situation. Tribe has fought Tribe and Nation Nation since these units of popular organization have been in existence. The Home Front has always been there, so that the reactions which those who stay at home must follow are as fixed in pattern as is the traditional behavior of the warrior. What has happened in the past will happen now. Therefore, it is possible to predict wartime effects as well as post-war behavior. Civilization has changed; global war is new; aerial war has brought a new strain to the stay-at-home. Yet, to treat wisely what is happening and to prevent some of the evils bound to come, it is necessary to investigate a few of the fundamental reactions behind war, as well as those which follow in its wake.

The fundamental of greatest importance is that war is a disease of Nations very similar to mental disease of the individual. It is a psychosis of Nations, a personality disorder involving the total reaction of the State. The Nation as a unit or, if you wish, a personality is sick, so that the people who are the minutia who compose that total structure have a personality disorder also. It is folly, therefore, to expect normal behavior during wartimes or during the immediate convalescence.

Another axiom is that war is practically always a flight from reality. When the problems of life get too tough or it seems that the Gods grind too slowly, man flies to war to escape the world old struggle of progressing civilization. He is like the alcoholic who escapes reality by a drug. Man goes on a spree and by the process of rationalization becomes drunk on his trumped up glory. Nothing is solved by war. Everyone loses, no one gains. Yet, for a time there is surcease from the steady grind of lasting progress. Therefore, our hopes for social benefit from this struggle are as vain as those of the drunkard's wife who brings her husband home from the gutter tattered and torn, battered and broken, with all the family savings gone to pay for the short period of exuberance.

With any mental illness there are always regressive tendencies. War itself is a great atavism; it is an archaic, outmoded type of human behavior accompanied by the most primitive reactions. The joy of killing, which was the chief joy of primitive tribes, has been inhibited for ages, while it is only in childhood's fantastic play that the slaughter of man by man is untrammeled by legalistic rationalizations. Nations do murder to Nations in our times, but no civilized Nation would admit that the call for human blood was a factor in the struggle. As wars continue, however, there is more and more regression. Brutality, beastiality and cannabalistic tendencies become more marked and more widespread. Therefore, in community living such trends will appear. The rules by which man can best live in close communion with his fellows, rules that have taken centuries to conceive and to have accepted as just and fair, will become ineffectual, will lose place and be forgotten. Altruism, justice, love and consideration for your neighbor, right living, and self-restraint out of consideration for others, are among a few of these rules that will be broken.

Yet, on the other hand, during the time of war something of value usually does appear. These gains of progress are the unexpected happenings, slipped in, as it were, while the Gods of Things as they are are engrossed in their traditional folly. During the French Revolution psychiatric patients were freed from restraint; during the last war psychiatry escaped from the institution into the community; during the War Between the States the colored man was freed from slavery; during the present war he is working for a place of dignity (it remains to be seen whether he will be worthy of it). Undoubtedly a new status for the women of America will be a by-product of this war. There will be others whose future worth cannot now be realized. We can be sure, however, that the high ideals publicized as war aims will fade with the peace and disappear with the convalescence.

In summary, communities as well as individu-

*Read before the Mental Hygiene Section of the Virginia Conference for Social Work, Roanoke, April 23, 1943.

als cannot be normal in wartimes, so it is now needless to apply the plans for usual living. New plans are necessary. Next, progress in Mental Hygiene such as this Society embraces is a step toward a better civilization, while war is a flight from the inhibiting bounds of right living, so that there is hope for nothing or very little until man is sober again. Then, thirdly, regressive trends in human behavior will become widespread, infiltrating the community more and more as war continues. Last, there is hope in the by-products of war. Perhaps if we plan we can determine what they shall be, so that there shall be no repetition of such mistakes as the Eighteenth Amendment. Finally, let us hasten to spread the Gospel that war is a disease, that the world is sick, and that it is folly to hope for anything more from it than a quick recovery.

These are among the fundamental effects that are common to all wars. It is certainly safe to say that they will be in force in our community during the next five or six years, so it behooves us to apply them to the individuals we live with to see if we can predict what will happen and to consider what we can do about it.

The father principle of security and the mother principle of an all-abiding love are the basic needs of the child. Provided the child is not grossly handicapped by inheritance or disease, if these two elements are given, the resilience of childhood will enable the child to weather any storm. Broken homes are the menace; broken by industry, broken by war, broken by sudden wealth, or broken by discord within the family circle. We can expect a greater breakdown in the family group, so substitutes must be found. The school must take over the duties of the home; the Church and the Department of Recreation must be more interested in the child; The Department of Public Welfare must have more and better boarding homes; communities must be aroused to meet the call of the homeless child.

The adolescent in time of war is in the center of the social whirlpool. As war continues and the community mores weaken, juvenile delinquency descends the age scale until it reaches its peak in the twelve or fourteen age group. Adolescence is the period of sex adjustment, as well as the time for the final separation from the home. But in war this change comes with a rush, overwhelming the pubescent child. There is only one way to attack this regressive tendency, the way of knowledge and truth. The school and the home must start sex education early, with frankness and honesty. Hygiene courses for the ten year olds which present the facts of life should be emphasized. The sacredness of parenthood and the responsibility for inheritance must be emphasized before the tremendous hormonic urges of the "teen age" upset individual behavior in an upset world.

Responsibilities formerly reserved to adults must be dropped down the scale. Child labor, properly supervised, is better than crime. Regression must be met by greater knowledge and younger weaning, if we are to escape its dire effects.

The new probation and parole law is taking care of the adult criminal who is discharged from the penitentiary, but it has nothing to do with juveniles. A probation officer connected with each juvenile court throughout the state will be a necessity during the next few years. Also, in each grammar school as well as high school a truant officer or visiting teacher to study the personality needs of the student at school and in the home would help tremendously in the times to come. If such an individual is not supplied the school and the community cannot be expected to meet their adolescent problems successfully.

The Age of Chivalry is from eighteen to twenty-five. Youth goes forth with a shining armor to fight the wars of the world, fostered on him by old men who, in turn, are driven by their waning strength into a lust for power. But youth pays the penalty; our youth are going and will continue to go. The community is left to women, the old men, and those who for one reason or another are unfit for war. The women and the old men must tighten up their belts as never before to keep the home fires burning so bright that the young man, rejected even on the home front, can still satisfy his need for high adventure.

The problem of the "4 F's" hinges on the spirit of the home front. There is work for everyone. The mentally sick, be he a mild psychoneurotic or prepsychotic who returns, must be diagnosed rapidly and as rapidly put to work. The admissions to Mental Hospitals in England have fallen in number. The clinic calls are less because all men have a simple purpose in living, working for the security of all. The rejection of the potential neuropsychi-

atric casualty is the greatest thing that has happened in this war and is the greatest challenge to Mental Hygiene. This Society should formulate a program to take advantage of this opportunity. Little more is known of tuberculosis than was known twenty years ago, yet anti-tuberculosis drives are successful. The knowledge concerning cancer cures has advanced very little in the same period, but cancer programs are popular. Much more is known regarding the prevention and cure of mental disorders than was known twenty years ago; yet Mental Hygiene falters and stumbles along, pushed into the outer darkness by human neglect.

With the peace many of the problems of the late depression period will return. Unemployment will raise its ugly head, since there is yet no solution to the over-supply of labor in a machine age. The unfit man who now holds a job far beyond his deserts will be again on relief when the armies of the world are disbanded. It will be too late then to prevent this post-war debacle. The condition which produced Fascism and gave the State powers over the rights of man that have threatened the life of our own Republic will return again unless something can be done.

Now is the time to get hold of the neglected child in the marginal family, or in broken home to prevent his becoming a candidate for future dole. Now is the time to strengthen our educational program so that from being one of the most illiterate of States, Virginia can bring education to all, an education which not only teaches reading but prepares for life. Now is the time for a positive Mental Hygiene program set to prevent the disasters that the future holds.

In a world out of joint, as man turns away from progress back toward outmoded orgy of decay, let us try to make a positive program for Mental Health, one of the hopeful by-products of the upheaval. The Selective Service has given us much data to work with. There is the experience of other wars and of other Nations at war. Surely there can be some practical plan.

There should be more and more boarding homes, more probation and truant officers in every community, sex education and a strengthening of morals for the child at puberty. A check should be made on our neuropsychiatric rejects with immediate occupation as the main form of therapy; also a cleaning up of our source of inapts by attacking the marginal family and by solving the problem of illiteracy. These few steps can certainly be considered as wartime emergencies. Finally, by spreading forth the doctrine that while liberty and freedom are our inheritance they must be earned both now and after the war. A Country whose people as individuals are not worthy of liberty shall certainly have liberty taken away.

The Modern Attack on T. B.

In spite of the steady improvement in diagnostic techniques and facilities during the past twenty years, little substantial progress has been made in finding cases of early tuberculosis. The reasons for this failure are too well known to call for discussion here. Briefly they can be reduced to two facts: early tuberculosis rarely gives rise to symptoms, and apparently well people seldom consult a doctor. (Henry D. Chadwick, M.D., and Alton S. Pope, M.D.)

XUM

THE TREATMENT OF ECLAMPSIA WITH VERATRUM VIRIDE

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In bringing this subject to you it is my object to review very briefly the development of rational methods of treatment as they have appeared and to report a few cases. It seems to me that real improvement has recently been made in the management of this most serious complication of pregnancy and the renewed interest in veratrum viride may help to lessen the impressive mortality of this disease. Even today, however, we find toxemia of pregnancy as one of the most frequent causes of maternal death. In ancient times it appeared that few attempts were made to differentiate or classify the various conditions which might produce convulsive attacks. The treatment was the same in all cases without any concern as to sex, age, history or other factors which might appear to us of vital import. As time passed it gradually was noticed by some that pregnancy seemed to render the convulsions more serious and it was later noted that the gravid state was often the cause of this condition. Only about the beginning of the 19th century, however, was eclampsia considered as a separate disease.

During the middle ages the convulsions were treated by bleeding, purging, blistering, etc. It was thought that the condition was due to "something wrong in the head", and consequently most therapeutic remedies were directed as near as possible to this part. Also, it was thought that since the convulsions were associated with pregnancy, the cure would depend upon rapid termination of pregnancy. Such a view, indeed, has survived until a very recent time. Many and varied have been the means employed in the treatment of convulsive toxemias, including manual dilatation of the cervix, internal versions and extractions, lumbar puncture, decapsulation of the kidney, etc. Among the drugs employed, opium and its derivatives have occupied an important place; however, chloral, paraldehyde, the barbiturates, chloroform, and practically all sedatives have been used. In addition to these magnesium sulphate and veratrum viride appear to have real value. Baker, of Eufaula, Ala., first used veratrum viride in a case of post-partum eclampsia in 1859. Twelve years later a series of ten cases treated with veratrum viride was reported by Fearn. Following this several reports appeared and in 1905 Kirkley stated before the American Gynecological Society that veratrum viride was almost as good as venesection. It will thus be seen that this drug is not a new one but was used for many years with fairly good results. Just why it was abandoned is hard to understand unless it be that the advocates of accouchement force were able to take the center of the stage at about this time. Needless to say, all procedures which aimed at immediate rapid delivery have since been shown to be ill-advised and are seldom practiced today by well trained men.

The conservative ideas of treatment have gradually resolved themselves into two large groups. The first of these may be called the Strognoff, and consists, in its present modified form, of the administration of morphine hypodermically and chloral by rectum. Great stress is laid upon removing all sources of irritation such as light, noise, etc. Inhalations of chloroform may be given, and magnesium sulphate by vein is prescribed. The second method, which may be called the Rotunda, relies mainly upon purgation, gastric lavage, and starvation, the belief being held that the absorption of food was largely responsible for the convulsions. Many combinations and modifications have developed from these underlying principles. The radical ideas have been largely replaced by these more conservative practices, and at the same time improvements in operative technique and anesthesia have contributed to a general lowering of the mortality of this condition. Many reports have been published from time to time, and among these I will mention the very excellent series of Dr. M. P. Rucker—143 cases with a maternal mortality of 4.16 per cent. In securing this result certain principles have been laid down and are, I believe, the real basis for the successful handling of the eclamptic patient: 1. Stop the convulsions. 2. Good nursing, quiet, and rest. 3. Water and possibly intravenous solutions. 4. Digitalis. I have followed these precepts for years and am in entire accord with these ideas. Briefly the convulsions are controlled by the use of magnesium sulphate given intravenously and possibly sodium amytal may be necessary. The nursing care protects the patient against injury and external stimuli and, since rest is considered of prime importance,

gastric lavage, colonic irrigations, purging, etc., are omitted. Water is given by mouth or nasal tube in preference to intravenous injections, as this is easier and safer. The use of digitalis is apparently most valuable in preventing pulmonary edema and, while some of our cardiologists question its administration, I am personally in favor of giving it. It has certainly been more than justified by clinical experience.

In October, 1940, Bryant and Fleming published a paper in which they reported 120 cases of eclampsia with only two maternal deaths, and neither of these was due to the toxemia. Bryant had previously reported a series in 1935 using veratrum viride but this new report reveals that he now relies much more on it than formerly. He believes that many if not all of the phenomena which cause the clinical picture of eclampsia are consequences of abnormal vaso-constriction. Naturally the ideal treatment would be to treat or eliminate the causative toxin. So far, however, this "toxin" is neither known nor has it ever been isolated. Their treatment is essentially conservative. The blood pressure and pulse are controlled by veratrum viride and magnesium sulphate is given by muscle. Twenty per cent glucose is given intravenously every six hours until consciousness returns. No sedatives are given unless there is extreme restlessness or the patient is in labor. Later, a salt free diet is used. Nothing is done about induction of labor until the toxemia is thoroughly controlled. To quote from Bryant's paper, he believes that "Abnormal vaso-constriction is a fundamental pathologico-physiologic phenomenon in eclampsia and that the elevated blood pressure is a simple fact with the action of veratrum viride easily explainable. The theory is that the products of conception produce, or cause to be produced, some kind of "toxin" which is a powerful vaso-constrictor. Further, increasing vaso-constriction causes progressive damage and hypertension with increasing anoxemia, retention of waste products, edema, and even necrosis.

If this premise is allowed, the action of veratrum viride is obvious and desirable. Being a vaso-dilator, it relieves the constricted arteriolar bed, allowing an improved and abundant blood supply to become at once available. A blood pressure drop follows quickly, but the primal value of the drug is to produce general vaso-dilatation and consequent improvement in arterial circulation throughout the entire body.

In January, 1943, Smith *et al* of the Boston Lying-In Hospital published a paper on the "Effect of Veratrum Viride upon the Urinary Estrogens in Pre-eclampsia." This paper is mentioned to bring out the fact that these workers in Boston have also found the action of the drug to be most dramatic. They encountered the marked slowing of the heart and rapid decline of blood pressure, but in addition there is a change occurring in the relationship of the various estrogenic substances in the circulation. They conclude that in pre-eclamptic and eclamptic states a marked change in the estradiol, estrone, and estriol balance is found, but when veratrum viride is given the improved vaso-dilatation causes a sharp increase in the metabolic conversion of the estrogens. Of course, this hormonal change is as transient as are the other effects of veratrum viride.

Since reading Drs. Bryant and Fleming's article I have had four cases of eclampsia and in these have endeavored to follow out their treatment. In one of these the referring doctor, the interne, and I are sure that veratrum viride was given but no record of its administration appears on the chart. The rest of their treatment was followed and is recorded. Dr. M. P. Rucker has also had two cases in which he used veratrum viride and allows me to present these with my own. There were no maternal deaths, but one baby died after a difficult delivery due to a constriction band.

Time does not permit detailed recounting of the six cases, but I would like to outline the treatment in my last case: *Case 6.* Mrs. J. H. was seen by me in consultation with her family physisian at 3:50 A. M. on February 11, 1943. It appeared that this patient, a white primipara, 26 years old, had entered the hospital the preceding morning because of pre-eclamptic toxemia and was five days post mature. Her blood pressure is recorded at 200/124. Labor had been induced by another physician at 2:45 P. M. on February 10, 1943, by rupture of the membranes and labor had started soon after. The patient had been given 1 oz. of castor oil, 7½ grains of sodium amytal, and two injections of hyoscine. At 10:25 P. M. 10 cc. of magnesium sulphate, 25 per cent soloution, had been given intravenously because of the continued hypertension. At 3:15 A. M. the patient had had a hard

convulsion and 10 cc. more of magnesium sulphate solution had been given. When I first saw the patient a few moments later, she was extremely restless, twitching, and apparently was on the verge of another seizure. Her blood pressure was then approximately 190/120 and the pulse 120. Veratrone, min. 10, was given intramuscularly at 4 A. M. and was followed ten minutes later by 5 min. more. A few moments later the blood pressure had fallen to 140/110 and the baby was delivered with low forceps under light gas oxygen anesthesia combined with local. Immediately following delivery it was found that the blood pressure had fallen to 90/48 and the pulse was recorded at 60. From this time on the patient's course was entirely uneventful. Veratrone was given whenever the blood pressure seemed to be rising unduly and intra-muscular injections of 5 cc. of magnesium sulphate, 50 per cent solution, were given eight times. In addition to this, her medication consisted of small doses of phenobarbital, a few tablets of ergotrate, five doses of stilbestrol, mg. 1, for engorgement of the breasts, and occasional analgesics for various discomforts. In all, a total of 45 min. of veratrone were given. It is felt that this patient undoubtedly had eclampsia, exhibiting a typical convulsive seizure, marked albuminuria, and severe hypertension, with coma following the single convulsion. Her progress in the hospital was unmarred by any untoward incident following delivery and she was discharged with her baby 9 days after delivery in good condition.

In conclusion, it may be stated that this case is typical of my experience in the few cases in which I have used this drug. I wish, therefore, to endorse the report of Drs. Bryant and Fleming, and desire from this small experience to recommend veratrum viride as a most valuable drug in the treatment of eclampsia.

NOTE. Since this paper was put in type, the author has had one additional case of eclampsia which was successfully treated by the above method.

Professional Building.

Floral Eponym (7)

MARSHALLIA TRINERVA—SCHREBER

MOSES MARSHALL (1758-1813) was what Lord Moyniham called a medical truant, for while he studied medicine for two years under Dr. Nicholas Way of Wilmington and attended a course of lectures by William Shippen and Benjamin Rush and attended the wounded in the Battle of Brandywine, his true vocation was botanizing. His vocation took him through the Alleghany mountains of Pennsylvania and West Virginia and through South Carolina and Georgia.

Many authorities state that the *Marshallia* is named for Mr. Humphrey Marshall who was a better known botanist, but Dr. Kelley unearthed some letters written in 1792 that settled the question. Muhlenberg, the correspondent, was a leading Philadelphia botanist. The letter from Muhlenberg to Dr. Moses Marshall reads as follows: "Dear Sir, I beg leave to inform you that the new edition of the *Genera Linnaei* is safely arrived. I am happy to see that the editor, my friend, Dr. Schreber, has done what I requested of him. He has given your name to a hitherto undescribed plant that belongs to the *Syngenesia* which he names the *Marshallia*. Give my best respects to your uncle, Mr. Humphrey Marshall, and believe me with great esteem, sir,

"Your humble servant,

Henry Muhlenberg."

HOOK WORM DISEASE*

THOMAS RUSSELL LITTLEJOHN, M.D.,
Sumter, South Carolina.

A subject which is, perhaps, usually considered too trite for consideration is that of hook worm disease, especially in connection with obscure symptoms or those patients who do not respond to treatment for original diagnosis.

These cases of hook worm would probably not have been discovered had it not been for making some simple routine laboratory examination.

In looking over my records of the last hundred cases that I have examined, I find there are twenty-one patients who had had a major operation that seemed unjustifiable. There were twelve other cases that had been advised to have a laparotomy for peptic ulcer or appendicitis.

Case 1.—A married woman, 32 years of age, a multipara. Complaint: pregnancy, weakness, pain in epigastrium and nervousness. She had had some pain in her epigastrium prior to this pregnancy. Physical examination showed her to be five months pregnant, mucous membranes of her mouth were pale, hypotension; other physical examination was negative. She had been examined at a well known clinic and the diagnosis was pregnancy, malnutrition and secondary anemia. Laboratory findings: Red blood cells 3,000,000, hemoglobin 70 per cent, 4 per cent eosinophiles; gastric analysis—anacidity. As this woman had lived in a tropical country for several years, I suspected hook worm disease. Stools were positive for hook worm ova.

Case 2.—A boy, fourteen years of age. Complaint: Diabetes of three years' standing, and his mother said she could not "fill him up". This child was fairly well developed, poorly nourished. He seemed to be alert mentally, but his mother said that he had lost a good deal of time from school, because he felt weak most of the time, and was only in the seventh grade. He had been treated in two well-known clinics with a diagnosis of diabetes mellitus only. The laboratory findings were 3.3 per cent sugar, eosinophiles 12 per cent, hemoglobin 65 per cent, red blood cells 2,700,000. As this child was born and reared in a county in the lower part of the state, I suspected hook worm disease too. Stools positive for hook worm ova.

Case 3.—White married man, age 28, railroad fireman. One night he came in from his run, complaining of severe pains in his epigastrium and cold sweats. He attributed this to four sandwiches and two coca-colas that he had about two hours before. He was in a moderate amount of shock, and was given ¼ grain of morphine and 1/100 grain of hyoscine. The next day he was improved and had practically no pains in his epigastrium. On examination there was no tenderness on pressure; abdomen was otherwise negative. At this time he told me he had had attacks of gas on stomach, pains in epigastrium for several years, but never vomited, and he had passed no blood in his stools. Blood: Hgb. 73 per cent, red blood cells 3,600,000, white cells 11,200, polys 61 per cent, small lym. 34 per cent, large lym. 4 per cent, eosin. 5 per cent. Gastric analysis: Free hydrochloric acid 44 degrees; total acidity 72 degrees. Stools positive for hook worm ova. X-ray findings: Duodenal ulcer.

Case 4.—Male, age 26, who had had indigestion for several years. He had been operated on for duodenal ulcer, gastro-enterostomy. His condition was not improved. His physical examination was negative. Hemoglobin 65 per cent, red blood cells 2,800,000, eosin. 11 per cent, no free hydrochloric acid. His stools were positive for hook worm ova. He was greatly improved after taking the treatment for hook worm.

Case 5.—White male child, 8 years of age. Influenza pneumonia. He had from six to eight bloody painless stools a day. His mother states that prior to this present illness he was subject to colitis for several years. After recovery from the pneumonia, hemoglobin was 60 per cent, red blood cells 3,000,000, eosinophiles 13 per cent. The stools were positive for hook worm and since the usual treatment for hook worm he has had no diarrhea.

The eggs are ellipsoid and segmented, and are usually divided into 4, 8, or 16 segments. They have a thin clear shell. In collecting the specimens, they should be put into a glass jar or bottle and corked tightly to keep them moist, as dry stools are unsatisfactory. A rather thin specimen is then put on a slide and mixed with a drop of water, using a

*Read before the Staff Meeting, at Tuomey Hospital, Sumter, S. C., April, 1943.

XUM

low powered lens. It is unnecessary to use the sedimentation test, as it takes too long.

The portal of infection is usually through the broken skin, on the feet of children, or on the hands of miners and plumbers. Sometimes the infection is by mouth. Loos has shown the larva enters the skin, is carried by the veins to the lungs, from there to the bronchi and trachea; through the eosophagus to the stomach and intestines. They usually live in the jejunum, but all first six feet of the intestines may be involved. They produce characteristic lesions of the mucous membrane of the small bowels.

The content of the bowels are very often blood stained. In the one hundred cases gastric analysis was made on seventy-nine, and in all, with the exception of *Case 3* in whom there was probably a duodenal ulcer, there was a hypochlorhydria.

Hook work disease very often resembles duodenal ulcer which, of course, does not often occur until after the age of thirty, but hook worm is most often first found in childhood. It often produces severe widespread pain in the upper abdomen, but it is not typical as is ulcer pain on an empty stomach.

These patients will tell you that taking soda very often gives temporary relief.

Thymol is the best treatment: Epsom salts should be given the night before, followed by 30 grains of thymol the next A. M.; two hours later this should be followed by 30 grains more, and two hours later another dose of salts should be given. The thymol can be given in a little whisky, orange juice, or grape fruit juice. Routinely we repeat this for three treatments.

Conclusion: All cases of chronic pain in the upper abdomen, especially with an increase of the eosinophile count should be examined by a competent technician for hook worm ova. Each condition will often show a small amount of blood in the stools. Duodenal ulcer and hook worm disease are sometimes associated in the same patient. The thymol treatment is the least toxic and the most effective of all those used.

Pre-Medical Education.

"Acceleration in medical schools does not involve any basic change except the elimination of the long summer vacations. A significant increase in weekly work by the student is not required. The pre-medical programs, however, shorten the program mainly by a weekly increase in the quantity of work carried by the student. . . .

"Whether or not students will be able to carry this heavy load remains to be seen. These students will, however, be free from financial worries and the necessity for outside employment. They will receive medical care, and more attention will be paid to the students' physical condition.

"The results of this experiment in concentrated pre-medical education will be watched with interest by all who are concerned with pre-professional education in every field, since it may offer a solution of the problem of reducing the long years of training required by the learned and scientific professions. . . . "

Discussing "The Supply of Physicians," *The Journal* says that "More than 4,000 seniors who entered the accelerated medical education program over a year ago are now well into their intern year and will complete that training before March 31, 1944. They will thus become available for military and civilian practice three months earlier than in normal times. Even half of these, should only that small proportion be commissioned, can care medically for over 300,000 troops. If this number of men is thereby enabled to enter active service three months early, before April of next year, the accelerated program will have justified itself in supplying the men required. . . ."

Postwar medical educational facilities are not being ignored. *The Journal* says that "Recognizing that large numbers of physicians will be seeking advanced training immediately after the war, the Council on Medical Education and Hospitals is making a careful study of the educational facilities in the graduate and postgraduate fields. A preliminary survey has already been instituted to determine what institutions and agencies will be able to expand their regular educational activities to meet additional postwar needs. . . . The large number of physicians who return to civilian life will likewise find that the medical profession, the schools and the hospitals stand ready to meet the educational needs of the postwar period."—(*J.A.M.A.*, Aug. 14, 1943, pg. 1126.)

HEPATIC FUNCTION IN ACUTE CHOLANGITIS
A CASE REPORT*

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There are many tests of liver function and frequent arguments arise as to their respective values. Those interested in a specific laboratory procedure show convincing proof of its efficacy, but only occasionally do these tests conform with clinical observation. In this particular case we were impressed with the close correlation between the clinical behavior of the patient and three liver function tests: the icteric index, cholesterol-cholesterol-ester ratio, and the hippuric acid excretion.

CASE HISTORY

A white male, 35 years old, had always been in good health, except for severe bronchial asthma in childhood and episodes of hay fever with food sensitivity, at infrequent intervals during his adult life. One month before the onset of this illness he was given tetanus antitoxin and typhoid vaccine, without any immediate ill effects. Five days before entering the hospital, the patient developed general malaise, headache, and a temperature of 101 degrees. Medication consisted of 6 grams of sulfathiazole daily for two days, and then 2 grams daily for three days. The patient continued to have fever and developed generalized aching about his body, with some nausea.

PHYSICAL EXAMINATION

An alert, pale, slightly lemon-tinged male, complaining of generalized itching about the body. There was a yellowish color to both sclerae. The lungs were clear and the heart was normal. Blood pressure 120/70. The abdomen was slightly distended and tender. A soft liver edge was felt 4 cm. below the right costal margin. There were no other abdominal masses. The rectal examination was negative except for a clay-colored stool. The calf muscles were not tender. The reflexes were normal.

COURSE IN THE HOSPITAL

The patient remained in our hospital for eighteen days. He was then confined to a naval base hospital for twenty-four days. The temperature subsided from 100 degrees to normal after three days and the patient gradually improved. His major complaint was severe itching. He was clinically asymptomatic except for a slight jaundice but, due to regulations, convalescence in a naval hospital was necessary.

The treatment in our hospital consisted of a high protein, high carbohydrate, high vitamin, low fat diet. The patient was also given intramuscular injections of Lederle's liver extract, 1 cc. daily; vitamin K and bile salts twice a day by mouth; elixir amino-acetic acid, 15 cc. three times a day orally; calcium gluconate, 10 cc. intravenously daily, and thiamin hydrochloride, 5 mgm. three times a day.

LABORATORY DATA

Urine:

5/12/42—Acid, specific gravity 1.018, negative albumin and sugar, positive bile, no casts or red blood cells on microscopic.

Blood: 5,480,000 RBC, Hgb. 113 per cent Sahli.

	WBC	P.M.N.	P.M.E.	P.M.B.	Lymphs	M.N.
5/12/42	5,300	54	4	1	19	15
5/13/42	4,400	48	6	1	34	11
5/16/42	4,100	38	6		45	9
5/20/42	5,900					
5/25/42	8,900	53	10	1	27	9

Reticulocytes:

5/18/42	5/20/42	5/21/42	5/25/42	5/28/42
2.6	1.2	1.8	2.6	1.8

Heterophile antibody negative. Prothrombin time—17 seconds. Mean corpuscular volume—109; mean corpuscular hemoglobin—32; mean corpuscular hemoglobin concentration—35. Non-protein nitrogen—30. Wassermann—negative.

5/12/42—Agglutinations negative, including proteus x 19 and Brucella.

5/14/42—Urine negative for leptospira icterohemorrhagica. Agglutination for Weil's disease negative.

Stools:

5/18/42—Negative for bile.

5/24/42—Positive for bile.

LABORATORY DATA RELEVANT TO DISCUSSION

Icteric Index:

5/13/42	5/14/42	5/16/42	5/18/42
36	40.4	62	58.6
5/20/42	5/22/42	5/25/42	5/28/42
58	55	44	38

From Department of Internal Medicine, Medical College of Virginia.

*Presented at Staff Meeting, Medical College of Virginia, May 13, 1943.

Cholesterol—Milligrams in 100 cc. of blood:

	Total	Free	Ester
5/14/42	125.5	105	20.5
5/18/42	205	170	35
5/24/42	272.5	212.5	60

Hippuric Acid Excretion in Urine:

5/18/42—Total volume 2010 cc., 0.964 grms.—benzoic acid as hippuric acid.

5/28/42—Total volume 2130 cc., 3.5 grms.—benzoic acid as hippuric acid.

DISCUSSION

There may be some question as to our clinical diagnosis of acute cholangitis. The points in favor of this diagnosis were the onset of a febrile ailment in a young man, with the development of jaundice, and enlargement of the liver. A sulfonamide reaction might produce the same clinical picture, but the findings of a leukopenia and increased monocytes in the peripheral blood smear are characteristic of acute cholangitis and would not be expected in any other form of hepatic disease associated with such a clinical picture. The icteric index is a simple color reaction, the standard being a 1-10,000 bichromate solution. It quite accurately shows the degree of jaundice but does not localize the involved area. Nevertheless, in this case the height of the icterus was compatible with other evidence of liver damage, and the gradual decline was in keeping with the general improvement of the patient.

The interpretation of changes in the blood cholesterol as related to hepatic disease by Hurxthal and Hunt,[1] Epstein,[2] and Greene,[3] indicate that, in the presence of hepatic injury, the cholesterol esters in the blood are reduced or absent. In normal individuals the cholesterol in the bile is present in the free state, while a considerable proportion of that in the blood is present in the esterified form. Bloor[4] states that there is a constant ratio of the combined cholesterol to the total cholesterol, varying from 65 to 75 per cent. When hepatic function is disrupted, there is a lowering of the total esterified cholesterol and a lessening of this physiologic ratio. This was true in our case and, as clinical improvement took place, this ratio rose from 15 to 22 per cent, with a rise in both total and esterified cholesterol.

In 1933, Quick[5] devised the hippuric acid excretion test as a method for evaluating the detoxifying function of the liver. The test is based on the conjugation of benzoic acid and glycine in the body. This reaction takes place in the liver under the influence of certain enzymes. The method of testing requires oral administration of 5.9 grams of sodium benzoate in a half glass of water. Quantitative urine specimens are collected at hourly intervals for four hours and the total amount of benzoic acid excreted as hippuric acid is estimated. Normal hippuric acid excretion averages 3 grams.

In this case the initial test, at the height of jaundice, showed less than 1 gram of hippuric acid excretion, and ten days later the excretion reached 3.5 grams, showing the return of normal detoxifying action of the liver.

It has been demonstrated that a combination of the icteric index, cholesterol-cholesterol-ester ratio and hippuric acid excretion tests would seem to be of great value in determining the extent and progress of liver damage. There are many other tests for liver function which are probably just as satisfactory; nevertheless, in this problem the procedures outlined seemed simple and adequate.

CONCLUSION

Acute cholangitis frequently causes severe liver damage which is not recognized by superficial clinical examination. Certain laboratory procedures help in determining the amount of damage. The liver has tremendous regenerative powers and in a short period of time hepatic injury has been repaired. The progress of this regeneration may be demonstrated by adequate liver function tests.

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1006 West Franklin Street.

CORRESPONDENCE

Will the Three Year Plan Last?

Richmond, Virginia,
August 9, 1943.

TO THE EDITOR:

Once more I must infringe upon your kind forbearance; this time to register my vehement objection to an editorial statement in the August issue of the VIRGINIA MEDICAL MONTHLY, page 427. In a discussion of the advisability of maintaining an accelerated medical course following the Duration, the statement is made that the faculty regard the long summer vacation as "their own especial time, necessary for their recovery from the strenuous winter teaching." This may be true in part, for undoubtedly a man is not able to retain a razor edge of mental keenness when teaching the same subject practically twice in one year. However, more important reasons for this hiatus are: first, to give the faculty time to carry on research; and secondly, to enable them to do the enormous amount of reading required to keep abreast of recent developments in their fields. Few men teaching in medical schools take an entire summer off, although some schools look with disfavor upon men not spending one quarter of the year away from the campus, provided they are productive scholars. Of course, what those men who do no research or who engage in no other productive scholastic activity do with their summer time no one seems to know, probably least of all themselves.

The editorial continues with the statement: "If this is really valid, the faculties can be enlarged. . . ." Of course they *can* be enlarged. The question is, *will* they be enlarged sufficiently so that any one man will have the same teaching schedule as before the war? This would require an increase in appropriations far above and beyond the increase in student revenue obtained by maintaining acceleration, to provide added salaries, quarters, and research budgets.

Little credit has been paid (or is expected by) the medical faculties of this country for unselfishly giving up time from their research, and income from consultative work and practice, in order to make acceleration possible—in most cases without any extra pay. Men with research interests, who are largely responsible for medical progress and education, will not consent to a permanent reduction in their time for research; rather than do year-round teaching they will turn to industry and practice where incomes are more commensurate with the amount of routine.

So much for the faculty. Now, for the most important contingent involved in this scheme: the students. I have already received complaints from students that under the accelerated program without the usual annual vacation period, they find that they are gradually falling behind, not only in digesting the subject material given them during the academic year, but in correlating the various subjects due to lack of time for proper reflection. Those who have had experience in schools which have long given work throughout the year inform me, furthermore, that as a rule students prefer to stretch the period of instruction over four years rather than to cram the material into a three year schedule.

All in all, I feel very strongly that, as done at present, acceleration of the medical curriculum is bad for the student, for the instructor, and worst of all for the patient of tomorrow. It is possible that some acceleration might be beneficial, but with adequate vacations at frequent intervals, as in the English system of higher education.

R. J. MAIN, PH.D.,
Professor of Physiology,
Medical College of Virginia.

Senate Bill 1161.

JEFFERSON HOSPITAL
PHILADELPHIA
August 10, 1943.

TO THE EDITOR:

I recently became very much interested in the new Bill that is now being prepared for Congress (S-1161). After reading it over, it suddenly occurred to me how little discussion I heard of it while I was carrying on my practice in Crewe, Virginia. Are we asleep or what? Do the practitioners in Virginia not realize that if this bill is passed private practice will be eliminated?

XUM

I enclose copy of a letter I have just written my congressman. I also enclose a copy of the literature sent to a friend of mine in the service, by the New Jersey State Medical Society.

I suggest that we do something similar in Virginia. Some of our boys back in Buckingham County may not know what has hit them until it's too late to do anything about it.

STANLEY H. MACHT, M.D.,
Resident in Radiology.

Vaccine Virus Used a Century Ago.

Richmond, Virginia,
July 20, 1943.

To the Editor:

The following is copy of a letter written by a Richmond physician, Dr. F. H. Dean, in 1848, to Mr. Martin B. Shepherd of Fluvanna County. I have learned that Mr. Shepherd was an intelligent land owner reminding one of William Byrd in his interest in those around him. The original letter, done in a very legible hand, was sealed without envelope and mailed without postage stamp but marked to show that five cents was paid to insure delivery.

W. T. SANGER,
President, Medical College of Virginia.

RICHMOND, JANUARY 14, 1848.

DEAR SIR:

Enclosed you will receive some fresh vaccine virus.

In order to vaccinate,—the matter must be reduced to the consistency of honey by the addition of a small quantity of water (a drop) a portion of it after it has been prepared is to be placed on some convenient part of the arm with a lancet—now make 10 or 12 punctures through the matter so slight as just to produce the appearance of blood,—before the sleeve is allowed to cover the arm, the matter should become dry, which will take 10 or 15 minutes. These are the only directions necessary to observe.

The virus I send you is taken from the arm of a healthy young person—matter procured directly from the cow is seldom used, that procured from the human subject being considered just as protective.

Most sincerely and truly
Signed — F. H. DEAN.

Letter addressed without any postage stamp to Martin B. Shepherd, Seven Island P. office, Fluvanna County, Va.

MILITARY MEDICINE
Virginia Doctors in Service
Supplement 5

This is the Fifth Supplement to the list of Virginia Doctors in Service, the original list appearing in the July 1942, MONTHLY, with supplements in September and October 1942 and January and April 1943. Names are given alphabetically, with home addresses, in view of constant changes in location and rank. The MONTHLY will appreciate it if any reader will advise of omissions that they may be included in a future supplement.

Members of Medical Society of Virginia

Dr. Charles V. Amole, Alexandria.
Dr. Nathaniel T. Ballou, Jr., Fredericksburg.
Dr. C. H. Bondurant, Riverton.
Dr. Harry Brick, Richmond.
Dr. Julius F. Chairsell, Christiansburg.
Dr. L. Philip Cox, Fredericksburg.
Dr. J. D. Creger, Dublin.
Dr. Robert H. Detwiler, Arlington.
Dr. Sandidge Evans, McClure.
Dr. I. D. Harris, Charlottesville.
Dr. A. M. Jacobson, Roanoke.
Dr. C. E. Jenkins, Alexandria.
Dr. Chas. F. Kincheloe, East Falls Church.
Dr. James P. King, Radford.
Dr. Nolton S. Lieberman, Norfolk.
Dr. J. T. McGriff, Arlington.
Dr. Marvin E. McRae, Luray.
Dr. Donald F. Marshall, Norfolk.
Dr. Milton Millman, Derby.
Dr. William M. Moir, Charlottesville.
Dr. C. D. Moore, Wytheville.
Dr. Dennis H. Robinson, Bedford.
Dr. Garland H. Wolfe, Abingdon.

Non-Members

Dr. E. W. Arnett, Danville.
Dr. Allen L. Byrd, Danville.
Dr. George Stone Ferrell, Lynchburg.
Dr. G. W. Shaed, Jr., Richmond.
Dr. E. B. Singleton, Richmond.
Dr. E. C. Stuart, Jr., Winchester.
Dr. Weir M. Tucker, Richmond.

CASE REPORT OF MATERNAL DEATH

MATERNAL HEALTH COMMITTEE
MEDICAL SOCIETY OF VIRGINIA

The patient was a 20 year old rachitic dwarf who had no prenatal care, until the eighth month of her pregnancy, when she visited a physician who, without examining her, referred her to a hospital for Cesarean section at term. She was admitted to a hospital during the eighth month of her pregnancy. She was not in labor. She was examined and referred to a nursing home for a two weeks period and was instructed to return to the hospital two weeks before the estimated date of confinement. She returned to the hospital one month later in labor. The cervix at the time of admission was two centimeters dilated.

The only other record of the findings on examination at the time of admission, which is available to the committee, are some external pelvic measurements, which are recorded as follows: Spines 22, Crests 24, External Conjugate 17, Tuber Ischii 8. No internal measurements were made. There is no record of the presentation, position, or height of the presenting part. Likewise there is no mention of the clinical impression concerning disproportion. The urine showed two plus albumin and an occasional glanular cast. Labor was allowed to continue for three days during which time morphine, hyoscine and cyclopal sodium were given for sedation. On the second day of labor obstetrical pituitrin three drops were given on three occasions. On the third day of labor the patient was delivered of a stillborn child by forceps under gas-ether anesthesia. A mucus tear was repaired, sulfanilamide powder placed in the vagina and the vagina packed with gauze. One half cc. of pituitrin was given after delivery.

Three hours postpartum the pulse became weak and rapid and the breathing difficult. There was not an excessive amount of bleeding. The patient gradually grew weaker and died five hours postpartum without response to treatment, although there is no record available to the committee of the type of treatment employed at this time.

COMMENT

This case has been considered as a preventable obstetrical death. There was no adequate prenatal care. Even after the patient had been seen at the hospital and instructed to return in two weeks for abdominal delivery, she failed to follow the instructions and did not return until the onset of labor. The course pursued on the second admission to the hospital is difficult to harmonize with the instructions to the patient at the time of the first admission, when she was instructed to return in two weeks for an elective Cesarean section. When she did return in four weeks at the onset of labor she was delivered through the vagina after a three day labor. There is no information available to the committee to indicate why the change in plan in the method of delivery. One member of the committee aptly noted that "If a section was indicated two weeks before term, it was certainly indicated two weeks past term."

This patient of course should have had a careful evaluation of the size of the pelvis in relation to the size of the baby. Formerly the obstetrician had to rely entirely on his clinical acumen in determining disproportion. More recently the use of x-ray pelvimetry and lateral films of the pelvis at term have been of immense aid in arriving at a decision as to the advisable method of delivery. It is suspected that in this patient x-ray measurements and lateral films would have suggested the advisability of abdominal delivery.

The use of pituitrin in a case of dystocia is never to be recommended and its use was probably inadvisable in the present instance. It is stated that there was no excessive bleeding after the delivery, yet a pack was inserted in the vagina. One wonders why the vagina was packed if there was no excessive bleeding. It is assumed that intravenous fluids and transfusions of plasma or whole blood or both were administered after the patient developed the rapid weak pulse, as the record states that she died without response to treatment.

It is quite likely that this patient had a ruptured uterus following the prolonged labor with probable bony dystocia, pituitrin and operative de-

XUM

livery. If so, early diagnosis with hysterectomy and copious transfusions may have been life saving measures. In any event, in instances of prolonged labor every effort should be made to obtain periods of rest with sedatives, and an adequate fluid and food intake should be maintained. Whenever possible maternal exhaustion and dehydration should be avoided.

PLAN FOR MEDICAL CARE OF WIVES AND INFANTS OF ENLISTED MEN

The plan for the care of the wives and infants of enlisted men in the armed forces as accepted by the Council of the Medical Society of Virginia is summarized below. This report is being made by the Committee on Maternal Health since reports from other states have shown that maternity cases comprise more than ninety-five per cent (95%) of those applying for care. The essential features of the program which was put into effect recently are:

Maternity cases as well as infants up to one year of age who are dependents of enlisted men of specified grades are eligible for care.

1. Care may be provided in Virginia for eligible patients who are within the boundaries of the State at the time care is necessary. Legal residence within the State is not required. Legal residents of Virginia who are beyond the boundaries of the State at the time care is necessary should apply to that State in which care is to be furnished.
2. Normal as well as cases with pathology are eligible.
3. Financial status is disregarded.
4. Home or *ward care* in hospitals agreeing to take these patients may be requested.
5. The funds authorized for ward hospital care cannot be used in part payment for more expensive hospital accommodations.
6. Self-explanatory application forms are available. *The patient has full choice of physician.*
7. Services rendered prior to date of authorization cannot be paid for except in emergencies.
8. The State Department of Health is to be the sole source of payment for services rendered. Federal funds finance the program.
9. Fees for professional services are to conform to the fee schedule specified by the U. S. Children's Bureau.
10. The authorization to the physician for care of the patient carries a form on which the bill is to be rendered to the State Department of Health.
11. The authorization to the patient carries with it the form to be used for admission in case hospitalization is advised.
12. The application forms are available from State and County Health and Welfare agencies, hospitals, American Red Cross Chapters, prenatal clinics, community agencies, and will be mailed to patients and physicians upon request.
13. Applications and correspondence relative to the care of these patients will be cleared through the Bureau of Maternal and Child Health, Virginia State Department of Health, Richmond, 19, Virginia.

The following fee schedule conforms with those accepted by other states, but it is less than that which was requested by the Virginia State Department of Health:

OBSTETRIC CARE

COMPLETE OBSTETRIC CARE.....$45.00

Complete medical services including care during the prenatal period, labor, and puerperium, as well as care of complications, obstetric operations, postpartum care, care of the newborn infant, postpartum examination six weeks after delivery, blood test for syphilis, urinalyses and hemoglobin determinations, and other tests if needed.

FOR SERVICES LESS THAN THE ABOVE THE FEES ARE AS FOLLOWS:

Prenatal Care $10.00

For complete prenatal care, including complete physical examination and necessary tests at first visit and four subsequent visits.

If less than above, $2.00 per visit.

Labor and Delivery:

For complete care during labor, delivery, and immediate puerperium ----------$30.00

For abortion or miscarriage before the 7th month of gestation----------$15.00

Postpartum Care:

For care of the mother and newborn infant and a postpartum examination at the end of six weeks ----------$ 5.00

OBSTETRIC CONSULTATION:

Services of a qualified consultant may be requested. An approved list of consultants will be established, based upon recommendations of the Maternal Health Committee of the Medical Society of Virginia:

1. Simple Bedside Consultation-------$ 5.00
2. Consultant services, including assistance at the time of an operative delivery ----------$15.00
3. Consultant services involving major surgery such as entrance into the abdominal cavity or cesarean section--$30.00

For services requiring travel in excess of ten miles but not more than fifteen (one way) from the consultant's place of residence $5.00 may be allowed in addition to the above fees. Ten dollars, in addition to the specified fees, may be allowed a consultant for travel in excess of fifteen miles.

PEDIATRIC CARE

Pediatric care is limited to care of the infant during the first year of life. (Crippled children are to be referred for care to the Crippled Children's Bureau):

First visit—Home ----------$4.00
Office or hospital ---------- 3.00
Subsequent visits—Home ---------- 3.00
Office ---------- 2.00

Provisions for payment will be limited to a maximum of $12.00 for first week and $8.00 for care during any subsequent week.

Well Child Supervision:

For routine medical supervision of the infant, including immunizations, and for visits at not less than four-week intervals, per visit, $1.00.

Pediatric Surgery:

To include complete surgical care of the infant during the first year of life:

1. Minor surgery ----------$ 5.00
2. Major surgery, including entrance into the thoracic or abdominal cavities and surgical treatment of major congenital defects not otherwise provided for under services for crippled children- 30.00

Pediatric Consultant Service:

Services of a qualified consultant may be requested. An approved list of consultants will be established, based upon recommendations of the Child Welfare Committee of the Medical Society of Virginia:

1. Bedside Consultation ----------$ 5.00
2. Consultant services involving minor surgery ---------- 10.00
3. Consultant services involving major surgery, as described under Pediatric Surgery ---------- 30.00

For services requiring travel an addition to the fees specified may be made as described under Obstetric Consultation.

MENTAL HYGIENE
Beers' Grandiose Idea

WILLIAM SHANDS MEACHAM,
State Parole Commissioner,
Richmond, Virginia.

It was noon on a sunny day in June, 1900, that Clifford Whittingham Beers, obsessed by the belief that he had become an epileptic, decided to end his life by hurling himself from the fourth floor of his home in New Haven, Connecticut. It was a curious whim of his sick mind that saved Beers' life for the new day of the humanities which was just dawning at the turn of the century. He actually took hold of a window sill with his hands and dropped to the ground. He landed on soft earth, only three inches from a stone pavement. It would not perhaps be strictly accurate to say that this three inches represented, at that critical hour, the margin of safety for a reformation in the methods of treating the insane in the United States, or for a far-reaching change in the public attitude toward mental illness in America, and throughout the world. It was high time that the public took a sane attitude toward those in mental hospitals, and the reformation, which was long overdue, would have found courageous leaders even if Clifford Beers had never had a rendezvous with the destiny that made him the founder of the mental hygiene movement.

When Beers wrote *A Mind That Found Itself,* there were leaders of psychiatry already working toward the goals of the movement for which the book became a great evangel. The humanitarian movement which had so animated thought in England and America during the latter years of the eighteenth-century intellectualism, was beginning to flower on many fronts of practical humanitarian effort. Preventive medicine was gaining a new impetus in every field. The lash and the chain were being abandoned in our prisons and talk was of the new "corrective justice", and of probation and parole. It was time for mental medicine to let go of the straightjacket.

Yet if Beers had not lived and worked, the light would have spread more slowly in a saner world, in which we no longer regarded the mentally sick as criminals, or persons possessed by devils. When death came to Dr. Beers a few weeks ago, the light had spread all over the world, and his great book had been translated into every civilized tongue.

The founder of the National Committee for Mental Hygiene had graduated from Yale University three years before he dropped from the window of his home, to suffer no greater injuries than fractured bones in his feet and a sprained back, but to find himself in the midst of a world of unreality from which it took him three years to escape. During these years, he went many times from the pits of depression and fancied persecution, to the heights of delusions of grandeur. As a patient, he ran the entire gamut of the stupid and cruel treatment given in the mental hospitals of the day. He was in a private hospital operated for profit; was later transferred to a non-profit making private institution, and then to a public hospital. The weak did not survive the treatment the mentally ill received in those years, but Beers was strong, with a will that was unbeatable and a memory that remained intact to record his remarkable experiences in a work of genius.

A Mind That Found Itself was a great book, and not merely the literary result of a crusading zeal for reform. As literature, it will live in the English language. When it was published in 1908, William James wrote the introduction. Our Harvard philosopher, whose treatise on "Habit" is as immortal as Rip Van Winkle, recognized the greatness of Beers' book at once. It was written with a lapidarian care, and actually was the literary distillation of the flood of words which Beers wrote in a state of elation during the last months of his illness, when he had caught the vision of a worldwide campaign to humanize the treatment of insanity, and to prevent mental illness. His was a grandiose idea that was translated into the realities of a new era of psychiatry. Once after his discharge from the hospital, Beers had a brief relapse, and went to a private institution for a month of treatment. His recovery was complete, and when he died a few weeks ago, he had received worldwide honors for a long life of achievement in a field of the humanities which he had charted himself.

Beers classic autobiography of his manic depressive psychosis increased the insight of psychiatrists into the thought processes of the mentally ill. His book and his dynamic career as the leader of the mental hygiene movement, destroyed the foundations of the fatalism that so long chained the progress of mental medicine. The force of his grandiose idea expanded the world of sanity.

SPECIAL MEETING OF THE COUNCIL, MEDICAL SOCIETY OF VIRGINIA

A special meeting of the Council was held at noon, June 25, 1943, in the Society's office, upon suggestion of the State Health Commissioner. Dr. J. M. Emmett, president, presided. Others attending were: Dr. Waverly R. Payne, vice-president; Drs. J. L. Rawls, J. M. Hutcheson, J. L. Hamner, W. C. Akers, and H. B. Mulholland, councilors; Dr. I. C. Riggin, State Health Commissioner; Dr. A. L. Carson, director of the Bureau of Maternal and Child Health of the State Department of Health; and Drs. H. H. Ware and Emily Gardner of the Maternal Health and Child Welfare Committees of the Society.

Being asked by Dr. Emmett for a statement as to the purpose of this meeting, Dr. Riggin said so much pressure had been brought to bear upon the State Health Department by the U. S. Children's Bureau with regard to hospitalization in maternity cases for the wives and infants of enlisted personnel of the armed forces that he felt the subject justified a reconsideration of the Council's action at its January meeting.

The plan proposed by the Children's Bureau is for the care of the wives and infants of men in the Service who make $72.00 a month or less and they will be given the service whether or not they are able to pay. They are to be placed in ward beds, even in private hospitals, and the fees are to be paid the doctors by the government. Dr. Riggin was still opposed in principle to some of the features of this bill but thought it might be well for the Council to reconsider their action, as a number of states have adopted a modified plan and it is likely Virginia may have to accept some plan.

Upon request, Dr. Carson presented an abstract of the plan proposed by the U. S. Children's Bureau, along with their suggestions for fees for physicians. The Virginia State Department of Health had worked out a higher fee schedule which was presented to the Council for consideration before being sent to the U. S. Children's Bureau for their approval. Attention was called to the fact that the fees in this revision are higher than those proposed by the Children's Bureau and may not be approved by them.*

In the discussion following, Dr. Payne said that, as it now is, these cases are going in the wards of the hospitals and physicians receive nothing.

Dr. Rawls moved that the Council go on record as favoring the acceptance of Federal funds from the U. S. Children's Bureau for maternity and infant care for wives and infants of certain enlisted military men, the program in Virginia to be under the direction of the State Health Department. This was carried and Dr. Riggin said Dr. Carson's department would submit the revised schedule to the Bureau for approval.

Dr. Emmett then read a letter from Dr. P. W. Boyd, president of the State Board of Medical Examiners, advising of the resignation from the Board of Dr. I. C. Harrison, on account of ill health. He asked that the Council make a recommendation to fill this vacancy. It was the consensus of opinion that this matter should be held over for action by the House of Delegates.

Adjournment followed.

AGNES V. EDWARDS,
Secretary.

Approved:
J. M. EMMETT,
President.

*The essential features of the plan and fee schedule as finally approved appear on page 462.

Presidents of the Medical Society of Virginia

PRESIDENT	YEAR OF MEETING
*Dr. James McClurg, Richmond	1821
*Dr. William Foushee, Richmond	1822
*Dr. William Foushee, Richmond	1823
*Dr. James Henderson, Richmond	1824
Meetings Discontinued.	
*Dr. Robert William Haxall, Richmond	1841
*Dr. Robert William Haxall, Richmond	1842
*Dr. Frederick Marx, Richmond	1843
*Dr. Thomas Nelson, Richmond	1844
*Dr. William A Patteson, Richmond	1845
*Dr. William A Patteson, Richmond	1846
*Dr. John A. Cunningham, Richmond	1847
*Dr. William A Patteson, Richmond	1848
	1849
*Dr. Robert William Haxall, Richmond	1850
*Dr. Beverley R. Wellford, Fredericksburg	1851
*Dr. James Beale, Richmond	1852
*Dr. Thomas P. Atkinson, Danville	1853
*Dr. Carter P. Johnson, Richmond	1854
*Dr. H. C. Worsham, Dinwiddie	1855
*Dr. H. C. Worsham, Dinwiddie	1856
*Dr. James Bolton, Richmond	1857
*Dr. Levin S. Joynes, Richmond	1858
*Dr. R. S. Payne, Lynchburg	1870
*Dr. R. S. Payne, Lynchburg	1871
*Dr. A. M. Fauntleroy, Staunton	1872
*Dr. Harvey Black, Blacksburg	1873
*Dr. A. G. Tebault, London Bridge	1874
*Dr. S. C. Gleaves, Wytheville	1875
*Dr. F. D. Cunningham, Richmond	1876
*Dr. J. L. Cabell, University	1877
*Dr. J. H. Claiborne, Petersburg	1878
*Dr. L. S. Joynes, Richmond	1879
*Dr. Henry Latham, Lynchburg	1880
*Dr. Hunter McGuire, Richmond	1881
*Dr. G. W. Semple, Hampton	1882
*Dr. W. D. Cooper, Morrisville	1883
*Dr. J. E. Chancellor, Charlottesville	1884
*Dr. S. K. Jackson, Norfolk	1885
*Dr. Rawley W. Martin, Chatham	1886
*Dr. Bedford Brown, Alexandria	1887
*Dr. Benjamin Blackford, Lynchburg	1888
*Dr. E. W. Row, Orange C. H.	1889
*Dr. Oscar Wiley, Salem	1890
*Dr. W. W. Parker, Richmond	1891
*Dr. H. Grey Latham, Lynchburg	1892
*Dr. Herbert M. Nash, Norfolk	1893
*Dr. Wm. P. McGuire, Winchester	1894
*Dr. Robt. J. Preston, Abingdon	1895
*Dr. Wm. L. Robinson, Danville	1896
*Dr. Geo. Ben Johnston, Richmond	1897
*Dr. Lewis E. Harvie, Danville	1898
*Dr. Jacob Michaux, Richmond	1899
*Dr. Hugh T. Nelson, Charlottesville	1900
*Dr. J. R. Gildersleeve, Tazewell	1901
*Dr. R. S. Martin, Stuart	1902
*Dr. J. N. Upshur, Richmond	1903
*Dr. Joseph A. Gale, Roanoke	1904
*Dr. Wm. S. Christian, Urbanna	1905
Dr. Lomax Gwathmey, Norfolk	1906
*Dr. Paul B. Barringer, Charlottesville	1907
*Dr. Wm. F. Drewry, Petersburg	1908
Dr. Stuart McGuire, Richmond	1909
*Dr. E. T. Brady, Abingdon	1910
*Dr. O. C. Wright, Jarratt	1911
*Dr. Hugh M. Taylor, Richmond	1912
*Dr. Southgate Leigh, Norfolk	1913
*Dr. Stephen Harnsberger, Catlett	1914
*Dr. Samuel Lile, Lynchburg	1915
*Dr. Joseph A. White, Richmond	1916
*Dr. Geo. A. Stover, South Boston	1917
*Dr. E. G. Williams, Richmond	1919†
*Dr. Paulus A. Irving, Farmville	1920
*Dr. Alfred L. Gray, Richmond	1921
*Dr. E. C. S. Taliaferro, Norfolk	1922
*Dr. John Staige Davis, University	1923
*Dr. W. W. Chaffin, Pulaski	1924
Dr. Hunter H. McGuire, Winchester	1925
Dr. W. L. Harris, Norfolk	1926
Dr. J. Shelton Horsley, Richmond	1927
Dr. J. W. Preston, Roanoke	1928
Dr. J. Bolling Jones, Petersburg	1929
*Dr. Charles R. Grandy, Norfolk	1930
*Dr. J. Allison Hodges, Richmond	1931
Dr. I. C. Harrison, Danville	1932
*Dr. J. C. Flippin, University	1933
Dr. R. D. Bates, Newtown	1934
Dr. F. H. Smith, Abingdon	1935
Dr. P. St. L. Moncure, Norfolk	1936
Dr. J. M. Hutcheson, Richmond	1937
Dr. G. F. Simpson, Purcellville	1938
Dr. A. F. Robertson, Jr., Staunton	1939
Dr. H. H. Trout, Roanoke	1940
Dr. W. B. Martin, Norfolk	1941
Dr. Roshier W. Miller, Richmond	1942
Dr. J. M. Emmett, Clifton Forge	1943

*Deceased.
†Owing to influenza epidemic and World War, meeting not held in 1918, and Dr. Williams continued as President.

PROGRAM

(PRELIMINARY)

MEDICAL SOCIETY OF VIRGINIA

October 25, 26, and 27, 1943

Roanoke, Virginia

Headquarters—HOTEL ROANOKE

BUSINESS SESSIONS

Monday, October 25

9:00 A.M.

REGISTRATION

9:30 A.M.

COUNCIL—Parlor 224

11:00 A.M.

HOUSE OF DELEGATES—Parlors A, B, C, and D

Tuesday, October 26

HOUSE OF DELEGATES—Time and Place to be announced

SCIENTIFIC SESSIONS

Monday, October 25

2:30 P.M.

Ballroom

Functional Uterine Bleeding—WILLIAM BICKERS, M.D., Richmond

A series of cases describing functional bleeding in the absence of organic disease. *Lantern slides* will demonstrate the endometrial pattern before and after treatment. The steps leading to accurate diagnosis will be shown in outline and the treatment described. Cyclic administration of Stilbestrol and Progesterone in the treatment of functional uterine bleeding will be described in detail and the effects of endocrine therapy upon the ovary and the endometrium.

Discussion—F. O. PLUNKETT, M.D., Lynchburg

Demerol: A Synthetic Morphine Substitute—CHARLES STANLEY WHITE, M.D., Washington, D. C.

Demerol, Dolantin or D140, as it is technically designated, is the nearest approach to a substitute for opium and its derivatives for relief of pain. It is the first product of uniform chemistry, synthetically prepared, which combines the action of morphine and atropine to a very great degree. These observations are confined chiefly to its use in general surgical practice and the work is summarized in a brief report.

Discussion—H. H. WARE, JR., M.D., Richmond
S. A. VEST, M.D., Charlottesville

Medical Progress During the Last Sixty Years—M. O. BURKE, M.D., Richmond

Evolution of medical colleges; preventive medicine; scientific diagnosis; specific medical treatment; treatment of the disease that afflicts the patient and treating the patient who is afflicted.

Discussion—JAMES K. HALL, M.D., Richmond

The Kenny Treatment for Poliomyelitis: One Year of Observation—CHARLES J. FRANKEL, M.D., Charlottesville

This paper includes the record of involvement and progress made on six cases which have been treated at the University Hospital, following rigidly the concepts of the Kenny method.

Discussion—ROBERT V. FUNSTEN, M.D., Charlottesville

The Treatment of Alcoholic Addicts—DAVID C. WILSON, M.D., Charlottesville.

Discussion of treatment of cases at the University Hospital, including those treated by psychotherapy and those by conditioned reflex, and also a discussion of methods of treatment that have been used in this and other countries, with conclusions regarding the necessary setup for a successful treatment of alcoholics in the State of Virginia.

Discussion—R. FINLEY GAYLE, M.D., Richmond

Monday, October 25

8:00 P.M.

Open to Public

Ballroom

Call to Order—JOHN O. BOYD, M.D., General Chairman, Committee on Arrangements

Invocation

Announcements

President's Address—JOHN MOREHEAD EMMETT, M.D., Clifton Forge

Memorial Hour—J. BOLLING JONES, M.D., Petersburg, Chairman Membership Committee

Address—Medical Operations in the Pacific Theatres—*Invited Guest*, C. C. HILLMAN, Brigadier General, Medical Corps, U. S. Army.

XUM

Tuesday, October 26

9:30 A.M.

Ballroom

Agranulocytic Angina—A Drug Hazard—ERNEST L. COPLEY, M.D., Richmond

This study deals with the hitherto rare disease entity, Agranulocytic Angina. Its etiology, an idiosyncrasy to certain drugs, is emphasized. Three cases are presented in outline, and some means of prevention are suggested. *Lantern slides.*

Discussion—WILLIAM B. PORTER, M.D., Richmond

The Treatment of New Growths at the Recto-Sigmoid—FRANK S. JOHNS, M.D., Richmond

Attention is called to the frequency of new growths at the recto-sigmoid, emphasizing the duration of such patients' illness before the physician and surgeon were consulted. When first seen, many are late, advanced cases, with local and general metastasis, and are already too late for surgical aid. A plea is made for a better understanding of the symptoms and earlier diagnosis of such growths, plus the indicated radical treatment for same.

Discussion—ALFRED P. JONES, M.D., Roanoke

Tuberculosis in the Aged—C. L. HARRELL, M. D., Norfolk

For many years tuberculosis has been called a disease of youth. It is the feeling of the writer that the age of expectancy has been greatly increased, as many more patients now coming up for examination are found to have tuberculosis beyond the age of 50 than were found a few years ago. *Lantern slides.*

Discussion—N. G. WILSON, M.D., Norfolk

The Continuance of Symptoms after Surgery of the Bile Tract—ERNEST T. TRICE, Lt. Colonel, M.C., Richmond.

Results of medical and surgical treatment are compared. The belief is expressed that surgical is many times superior to medical treatment, that there is hazard in delay, and that delay often results in extensive liver damage, with complications in the pancreas. *Lantern slides.*

Discussion—T. N. BARNETT, M.D., Richmond

Femoral Vein Ligation in the Treatment of Pulmonary Embolism Due to Femoral Thrombophlebitis—EUGENE L. LOWENBERG, M.D., Norfolk

Approximately one patient in twelve who survives an embolus due to femoral thrombophlebitis will have a subsequent embolus from which they will die. The phenomenon is purely a mechanical one, the emolus breaking off from the clot in the femoral vein and passing through the heart to the pulmonary artery. Emboli can with certainty be stopped by ligating and dividing the femoral vein proximal to the thrombophlebitic lesion. The site of the clot in the femoral vein can be determined by phlebograms. Two case reports, *phlebograms,* and a discussion of the operative procedure are included.

Discussion—HUGH H. TROUT, M.D., Roanoke

Pelvic Pain—Randolph H. HOGE, M.D., Richmond

This paper deals briefly with (1) the mechanism of pelvic pain, (2) a consideration of the anatomical pathways of the painful impulses, and (3) certain methods aimed at the relief of this pain. *Lantern slides.*

Discussion—C. C. COLEMAN, M.D., Richmond

Tuesday, October 26

2:30 P.M.

Ballroom

The Diagnostic Value and the Technique of the Aspiration Biopsy of Sternal Marrow—M. L. DREYFUSS, M.D., Clifton Forge

The examination of the blood forming organs, in addition to peripheral blood studies, is an important and frequently indispensable part of a hematological study. Illustrative cases are presented. The technique of the aspiration biopsy is discussed and a simple and efficient way of handling the specimen is described. *Lantern slides.*

Discussion—

The Prevalence and Diagnosis of Rickettsial Diseases—HARRY H. HENDERSON, M.D., Richmond

A discussion of the difficulties and methods of diagnosis and the prevalence and characteristics of these diseases in Virginia and neighboring states.

Discussion—H. B. MULHOLLAND, M.D., Charlottesville

Diabetic Coma—WILLIAM R. JORDAN, M.D., Richmond

A discussion of the treatment of about twenty cases of diabetic coma, including observations of symptoms and signs.

Discussion—C. D. NOFSINGER, M.D., Roanoke

Asthmatic Atelectasis Simulating Pneumonia—
DEAN B. COLE, M.D., Richmond
L. JAMES BUIS, M.D., Richmond

The importance of differentiating asthmatic acute pulmonary atelectasis from pneumonia is stressed, since the treatment of the two conditions varies markedly. Prompt recognition of the atelectasis is imperative to lessen not only the immediate morbidity but the irreversible pathological change which may result. Diagnosis may be made by correct interpretation of the history, physical signs, and x-ray films. It may be confirmed by lung mapping. Treatment consists of opening the airway and may necessitate bronchoscopy. Cases. *Lantern slides.*

Discussion—

Tuesday, October 26

6:00 P.M.

COCKTAIL PARTY, DINNER AND ENTERTAINMENT

8:30 P.M.

Address—*Invited Guest,* DON S. KNOWLTON, Captain, (MC), USNR.

Wednesday, October 27
9:30 A.M.
Ballroom

Acute Surgical Conditions Complicating Malignancy—JULIAN L. RAWLS, M.D., Norfolk

A statement as to the tendency of physicians to overlook acute surgical conditions arising in the course of treatment of patients with malignancies and a report of several cases seen recently.

Discussion—JOSEPH D. COLLINS, M.D., Portsmouth

Address—*Invited Guest*, JOHN Q. OWSLEY, Captain, Medical Corps, U. S. Army.

Recent Advances in the Pharmacology of Nicotine—
H. B. HAAG, M.D., Richmond
P. S. LARSON, Ph.D., Richmond

A report of recent studies conducted at the Medical College of Virginia on the effect of tobacco smoke and nicotine on human subjects and animals.

Discussion—EMIL BOGEN, Lt. Comdr., M.C., Norfolk Naval Hospital, Portsmouth
DOUGLAS G. CHAPMAN, M.D., Richmond

Reports and Observations on About Two Hundred Cases of Whooping Cough—
WILLIAM B. MCILWAINE, M.D., Petersburg
LETA J. WHITE, M.D., Petersburg

During the whooping cough epidemic in the Spring of 1943, every effort was made to determine the value of various prophylactic measures and also modern treatment.

Discussion—SAMUEL A. ANDERSON, M.D., Richmond

The Diagnosis and Medical Treatment of Pulmonary Embolism—JULIAN R. BECKWITH, M.D., Clifton Forge

A review of the principles of the pathological physiology of pulmonary embolism is presented. The rationale of medical treatment is discussed and three case reports given.

Discussion—EMMETT C. MATTHEWS, M.D., Richmond

Plastic Surgery of Severe Burns—EVERETT I. EVANS, M.D., Richmond

Discussion—

Special Society Luncheons
Tuesday, October 26
1:00 P.M.

Meetings Will Follow General Luncheon

AMERICAN COLLEGE OF PHYSICIANS, VIRGINIA SECTION
VIRGINIA OBSTETRICAL AND GYNECOLOGICAL SOCIETY
VIRGINIA ORTHOPEDIC SOCIETY
VIRGINIA PEDIATRIC SOCIETY
VIRGINIA RADIOLOGICAL SOCIETY
VIRGINIA UROLOGICAL SOCIETY

Wednesday, October 27
8:00 A.M.
Breakfast

ALUMNI ASSOCIATION, MEDICAL COLLEGE OF VIRGINIA

SCIENTIFIC EXHIBITS
Section of Ballroom

Activities of the State Health Department—
I. C. RIGGIN, M.D., Richmond
J. C. FUNK, Ph.D., Richmond

Correlation of the Physician and the Bacteriologist—
FREDERICK W. SHAW, M.D.,
F. J. GOODFELT, M.D.,
Medical College of Virginia, Richmond

The Nerves of the Female Genitals—
RANDOLPH H. HOGE, M.D.
LOUISE JONES, Technician
Medical College of Virginia, Richmond

Uterine Bleeding—WILLIAM BICKERS, M.D., Richmond

Carcinoma of the Larynx and Certain Lesions of the Esophagus—
F. D. WOODWARD, M.D., Charlottesville
M. K. HUMPHRIES, M.D., Charlottesville

COMMERCIAL EXHIBITORS
Palm Room and Peacock Alley

Coca-Cola Company
S. M. A. Corporation
Holland-Rantos Company
Van Pelt & Brown
Peoples Service Drug Stores
Eli Lilly & Company
Camel Cigarettes
Gilliland Laboratories
Ortho Products Company
Philip Morris Cigarettes
The Borden Company
A. S. Aloe & Company
Powers & Anderson
John Wyeth & Brother
E. R. Squibb & Sons
C. B. Fleet Company
Mead Johnson & Company
Ciba Pharmaceutical Products
Schering Corporation
Doak Company
General Electric X-Ray Corporation
Tablerock Laboratories

XUM

Public Health

I. C. RIGGIN, M.D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for July, 1943, compared with the same month in 1942, and for the period of January through July, 1943, compared with the same period in 1942, follows:

	July 1943	July 1942	Jan.-July 1943	Jan.-July 1942
Typhoid and Paratyphoid Fever	35	25	105	100
Diarrhea and Dysentery	1697	1166	2625	2079
Measles	322	124	9191	4748
Scarlet Fever	56	28	1089	737
Diphtheria	18	22	181	236
Poliomyelitis	7	4	22	11
Meningitis	53	11	693	114
Undulant Fever	9	3	23	17
Rocky Mountain Spotted Fever	19	11	28	25
Tularemia	1	4	28	26

BOTULISM

Because of the need for and rationing of food, more vegetables and fruit probably will be canned at home this year than ever before. Many who realize the need for safe processing of food will be unable to obtain steam pressure canners necessary for efficient sterilization.

Botulism is the most fatal type of food poisoning caused by bacteria or bacterial toxins. As Cl. botulinum is a common soil anaerobe, is spore forming and therefore very resistant to heat, and forms an exotoxin which may retain its potency indefinitely, an increase in botulism is not unlikely in the near future.

Most of the botulism reported in Europe has followed the eating of preserved meats, while in the United States home-canned vegetables have caused the greatest number of cases. Although nonacid foods have been responsible for more cases than acid food, there are outbreaks on record due to acid foods.

Two things should be remembered, that food containing botulinum toxin may not show any evidence of spoilage, and that after symptoms appear the toxin has probably produced damage which cannot be overcome by specific antitoxin.

The time that elapses after the eating of food containing botulinum toxin varies widely, depending on the amount of toxin ingested. While symptoms usually appear within 12 to 36 hours, there are cases reported in which symptoms did not develop until 108 hours after the contaminated food was consumed.

While specific serum therapy in botulism gives best curative results, polyvalent antitoxin may be given when the specific type of botulinum is unknown.

In the laboratory diagnosis of botulism the most valuable specimen is a sample of the suspected food in the original container. Since Cl. botulinum is widespread in nature it could easily be introduced at the time of collection of the sample. Therefore, greatest care should be taken in the selection of a container and transfer of the sample in order to avoid contamination.

Woman's Auxiliary to the Medical Society of Virginia

President—MRS. H. W. ROGERS, Norfolk.
President-Elect—MRS. W. CLYDE WEST, Alexandria.
Recording Secretary—MRS. C. C. SMITH, Norfolk.
Corresponding Secretary—MRS. ALBERT G. HORTON, Norfolk.
Treasurer—MRS. REUBEN F. SIMMS, Richmond.
Chairman, Press and Publicity—MRS. C. E. ARNETTE, Alexandria.

Convention Call!

I hope many are preparing to attend the Convention of the Woman's Auxiliary to the Medical Society of Virginia, which will be held in Roanoke, October 25-27.

On Monday evening, the 25th, the Pre-Convention Board meeting will be held. All officers, committee chairmen, and county presidents are expected to attend, and all county presidents-elect are invited to attend. Tuesday morning, the 26th, at 9:30, will be the opening of the regular business session, which will be followed by a luncheon.

All meetings will be held at Hotel Roanoke. Mrs. A. P. Jones, 1317 Franklin Road, Roanoke, is chairman of arrangements. This convention will celebrate our 21st anniversary as the Woman's Auxiliary to the Medical Society of Virginia.

Wives of physicians are invited to attend whether they are members of an auxiliary or not.

It is genuine hospitality in Roanoke having us come back for the second consecutive year. Let's show our appreciation by having a good attendance. Full program will appear in the October issue of the MONTHLY.

REBECCA S. ROGERS,
(MRS. H. W.)
President.

Book Announcements

Books received for review are promptly acknowledged in this column. In most cases, reviews will be published shortly after the acknowledgment of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

A Synopsis of Clinical Syphilis. By JAMES KIRBY HOWLES, B.S., M.D., M.M.S., Professor of Dermatology and Syphilology, and Director of the Department, Louisiana State University School of Medicine; Senior Visiting Physician, Charity Hospital of Louisiana at New Orleans; etc. St. Louis, The C. V. Mosby Company. 1943. 671 Pages With 121 Text Illustrations and 2 Color Plates. Cloth. Price, $6.00.

Medical Malpractice. By LOUIS J. REGAN, M.D., LL.B., Member State Bar of California. St. Louis, The C. V. Mosby Company. 1943. 256 Pages. Cloth. Price, $5.00.

Methods of Treatment. By LOGAN CLENDENING, M.D., Clinical Professor of Medicine, Medical Department of the University of Kansas; Attending Physician, University of Kansas Hospitals. And EDWARD H. HASHINGER, A.B., M.D., Clinical Professor of Medicine, Medical Department of the University of Kansas; Attending Physician, University of Kansas Hospital; etc. Eighth Edition. St. Louis, The C. V. Mosby Company. 1943. 1033 Pages. Illustrated. Cloth. Price, $10.00.

Rehabiltation of the War Injured. A Symposium Edited by WILLIAM BROWN DOHERTY, M.D., and DAGOBERT D. RUNES, Ph.D. Philosophical Library, New York. 1943. 684 Pages. Illustrated. Cloth. Price, $10.00.

The Boy Sex Offender and His Later Career. By LEWIS J. DOSHAY, M.D., PH.D., Psychiatrist, Children's Courts, New York City. Foreword by George W. Henry, M.D., Associate Professor of Clinical Psychiatry, Cornell University Medical College; etc. New York, Grune and Stratton. 1943. 248 pages. Cloth. Price $3.50.

Handbook of Tropical Medicine. By ALFRED C. REED, M.D., Associate Clinical Professor of Medicine, Stanford University School of Medicine. And J. C. GEIGER, M.D., Director of Public Health, San Francisco. Stanford University Press, Stanford University, Calif. 1943. Pocket size—188 pages. Cloth. Price $1.50.

Mental Health in College. By CLEMENTS C. FRY, M.D., Lecturer in Psychiatry and Mental Hygiene and Psychiatrist to the Department of University Health, Yale University. With the Collaboration of EDNA G. ROSTOW, Research Assistant in Psychiatry and Mental Hygiene, Yale University. New York. The Commonwealth Fund. 1942. xix-365 pages. Cloth. Price $2.00

This volume, in the usual attractive format of Commonwealth Fund publications, is a sound presentation by case history method of the mental health (and ill-health) problems of the college and university students. The experience of the author and his colleagues at Yale University, as outlined in this volume, has established a pattern worthy of Yale and an objective toward which every college should strive. The material is presented in simple, direct language which makes it interesting reading, equally to the medical student, practitioner, and the interested lay or community person.

J. P. GRAY.

Proceedings of the Eighth American Scientific Congress. Held in Washington, May 10-18, 1940. Under the Auspices of The Government of the United States of America. Volume VI. Public Health and Medicine. Department of State, Washington. 1942. 496 pages.

This paper-bound publication by the Department of State, Washington, 1942, of the proceedings of the Congress held in Washington in May, 1942, reports in abstract form and in complete form in several instances, papers relating to many phases of public health and medical practice in the Pan-American Republics. Section Five of the Congress is devoted to the field of public health and medicine and contributions relate to health education and sanitation; nutrition and dentistry; heart and blood diseases; communicable diseases, cancer; maternity and puericulture; psychiatry; miscellaneous. Context is in Spanish and English, an abstract in English usually accompanying the article in Spanish. Of particular interest to North American readers are articles on yellow fever; cancer; sulfonamides; onchocerciasis, brucellosis.

J. P. GRAY.

XUM

A Guide to Practical Nutrition. A Series of Articles on Nutrition, Sponsored by the Committee on Nutrition and Deficiency Diseases of The Philadelphia County Medical Society. Edited for the Committee by MICHAEL G. WOHL, M.D., and JOHN H. WILLARD, M.D. Introduction by MORRIS FISHBEIN, M.D., Editor of the *Journal of the American Medical Association*. Reprinted from Philadelphia Medicine, 1941-1942. 98 pages.

This is a series of articles on nutrition sponsored by the Committee on Nutrition and Deficiency Diseases of The Philadelphia County Medical Society. It was edited for the Committee by Michael G. Wohl, M.D., Temple University Hospital and Philadelphia General Hospital, and John H. Willard, M.D., Abingdon Memorial Hospital and Graduate Hospital of the University of Pennsylvania. A grant-in-aid from John Wyeth and Brother, Inc., Philadelphia, made it possible for the Society to publish the Guides and to distribute them as a service to the medical profession.

In the preface it is pointed out that education in nutrition must be supervised by medical authority. Most physicians appear to be so engrossed in diagnosis and treatment that they take little time to engage in public education. "So far at least as nutrition is concerned, the physician must become aware of his duties in the fostering of public health just as he is already aware of his duties in the fostering of private health." Pointing out that the future holds changes for the physician as for other men, the manual has been published in an effort to influence physicians to become better posted on the advances made in nutritional knowledge through biochemical researches and to take the lead in educating the public to the importance of proper nutrition as a means of improved health. Public opinion must be given more consideration by the medical profession if it is to maintain its place in a society becoming more and more complex. Dr. Fishbein writes in his introduction to the Guide, "Until adequate knowledge of deficiency diseases and scientific nutrition becomes the common property of all members of the medical profession, the utmost that can be realized in this field will not be accomplished." This statement is especially apropos right now since, in my opinion, the rank and file of physicians either lack the time or the inclination to keep abreast of this field, the most rapidly advancing one at present in all biochemistry. Consequently laymen have taken the lead in nutrition education with most physicians sitting back, wondering why, and oftentimes criticizing methods.

Eleven of the thirteen chapters are written by medical men so the point of view is decidedly practical. There is an appendix of twenty pages giving vitamin and mineral requirements, a vitamin chart, and tables of food composition. There is also a list of references and a cross index. Some of the references are old ones in such a rapidly advancing field. For example, the reference for essential amino acids is the Rose Harvey Lectures of 1934-1935. It is now questionable whether "ten amino acids are essential for human nutrition", histidine, for example. There is repetition throughout the manual but this is probably advantageous. The so-called "Yardstick of Nutrition" is listed five times, three times in one chapter! "Nutrition in the Older Individual" is well done and timely, geriatric nutrition having come to the fore in recent times. Diet in pregnancy and in childhood are discussed exceptionally well. There is a good chapter for dentists on "The Nutritional Aspect of Dental Diseases". The chapter on "The Vitamin B Complex" will be of interest since deficiencies of vitamins of this group are claimed to be the most commonly encountered clinically. Ariboflavinosis because of its reputedly high incidence, rates a chapter by itself. That deficiency states are not so simple is brought out by the statement: "A primary deficiency is one in which a deficient diet is the causative factor; a secondary deficiency is one associated with or perhaps caused by recognizable dysfunctions of the alimentary canal." Intestinal bacteria have caused vitamin investigators much trouble and will continue to do so for some time. Elvehjem has pointed out recently that abnormal intestinal flora may destroy some of the better known vitamins at a rate sufficiently rapid to produce nutritional deficiency in spite of the fact that the diet is adequate according to present standards. With such complexities concerned, certainly medical authority must take the lead in nutrition education. If this manual helps in bringing about this situation, its publication and distribution will have been eminently worth while.

SIDNEY S. NEGUS, PH.D.

VIRGINIA MEDICAL MONTHLY

Official Publication of the Medical Society of Virginia

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WYNDHAM B. BLANTON, M. D.,
Editor Emeritus

M. PIERCE RUCKER, M. D.,
Editor

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All correspondence regarding editorial matter, original articles, and policy should be directed to the Editor. Questions relating to subscription rates, advertising, etc., should be addressed to the Business Manager, 1200 East Clay Street, Richmond, Virginia. The MONTHLY is not responsible for the opinions and statements of its contributors. All advertisements are accepted subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association. Annual Subscription, $2.00. Single Copies 25c.

VOL. 70 SEPTEMBER, 1943 No. 9

More Doctors Needed for Armed Forces

WE presume that every doctor in the state of Virginia has read the article on page 1016 of the *Journal of the A.M.A.* for August 7, 1943. If any doctor has not done so, we trust he will do this at the earliest possible date. From this it will be seen that the War Manpower Commission now deems the military forces of the United States will have to have six thousand more physicians before January 1, 1944.

The Directing Board of the Procurement and Assignment Service has repeatedly stated that no one state will be allowed to compensate for the failure of another state to reach its quota. The following is a quotation from the above mentioned article: "The need is so positive that questions of essentiality of men in positions of teaching and research and in industrial medicine are likely to be rigidly reviewed in the near future with a view to extracting from civilian life every one that can be spared."

The various representatives of the Procurement and Assignment Service of Virginia are now going over their lists of doctors in each congressional district and seeing what can be done about allowing doctors to go to the military service, and at the same time, to protect the civilian needs. After a complete study of these different congressional districts, if, in the opinion of the Procurement and Assignment Service of Virginia, any doctor under forty-five years of age is considered available for military service and that doctor can be spared from the civilian community in which he practices, he will be notified and given an opportunity to apply for a commission. If he does not see fit to apply for a commission, his name, along with the recommendation of the Procurement and Assignment Service, will be turned over to his Local Selective Service Board.

The following is quoted from the above mentioned editorial: "Should it become necessary in the near future, as seems quite likely, to enlist new activity by the Selective Service Administration and the Officers' Procurement Service to bring in the six thousand physicians that are so certainly required, those recruited by that technic will

inevitably begin service with the minimum commission that is offered, namely that of first lieutenant. Until that technic is installed, the men of special competence and of years beyond those of the recent graduate have the assurance of careful consideration and a commission more nearly in accord with age and experience." Both the Headquarters Richmond Officer Procurement District, 614 Richmond Trust Building, Richmond, Virginia, and Office of Naval Officer Procurement, Fifth and Cary Streets, Richmond, Virginia, are assisting in this work now.

As Chairman of the Procurement and Assignment Service of Virginia for Doctors, this office is urging on every doctor under forty-five years of age to analyze carefully his own situation, and, if he would like to do so, discuss his situation with a local representative of the Procurement and Assignment Service. The physical requirements of both the Navy and the Army have been lowered during the past months; so some doctors who thought they were unfit for military service might now be accepted for commissions. It is now my own personal opinion that every doctor in the state of Virginia under forty-five years of age, who is physically fit, is going to find it extremely difficult to prove to the Selective Service System, without the aid of the Procurement and Assignment Service, that he is essential for civilian needs. In order that we might protect the civilian communities of this state, we are urging on every doctor in Virginia under forty-five years of age to contact the most convenient of the doctors listed below and talk over with him their problems relative to military service. Or, if they prefer, they can write directly to this office, but a talk with the local representative is usually more satisfactory. We realize that this has been done previously, but in order to bring our records of each individual doctor in the state of Virginia up to date, we are urging on you to do this at the earliest possible moment.

CONGRESSIONAL DISTRICT	
1.	Dr. G. W. Holland, Eastville
	Dr. Frank Pratt, Fredericksburg
	Dr. O. T. Amory, Newport News
2.	Dr. Julian Rawls, Norfolk
	Dr. Joseph Collins, Portsmouth
3.	Dr. J. Morrison Hutcheson, Richmond
4.	Dr. James L. Hamner, Mannboro
	Dr. W. B. McIlwaine, Petersburg
	Dr. Ray A. Moore, Farmville
5.	Dr. W. C. Akers, Stuart
	Dr. Julian M. Robinson, Danville
	Dr. E. M. Chitwood, Wytheville
	Dr. F. B. Teague, Martinsville
6.	Dr. W. L. Powell, Roanoke
	Dr. Bernard H. Kyle, Lynchburg
	Dr. J. M. Emmett, Clifton Firge
	Dr. A. M. Showalter, Christiansburg
	Dr. J. J. Giesen, Radford
7.	Dr. Alex F. Robertson, Staunton
	Dr. O. H. McClung, Lexington
	Dr. Noland Canter, Harrisonburg
	Dr. Phil W. Boyd, Winchester
8.	Dr. H. B. Mulholland, Charlottesville
	Dr. H. A. Latane, Alexandria
9.	Dr. Claude B. Bowyer, Stonega
	Dr. H. W. Bachman, Bristol
	Dr. W. C. Caudill, Pearisburg
	Dr. D. S. Divers, Pulaski

HUGH H. TROUT, M.D.,
Chairman, Procurement and Assignment Service for Virginia.

Wartime Increases in Tuberculosis and Methods for Discovering New Cases

THE program of tuberculosis prevention and control in this country has for the past few years been seriously handicapped by the difficulty in locating a large number of cases sufficiently early to eliminate the spread of infection and effect cures through treatment. The Early Diagnosis Campaign promoted each spring by the National Tuberculosis Association represents an educational effort to encourage case finding

while patients are still in the early stages of the disease. The annual Campaign has resulted in numbers of case finding surveys among students, teachers, nurses, patients in mental hospitals, as well as industrial workers in various other special groups. In spite of all this activity aimed at the discovery and diagnosis, the minimal cases admitted to sanatoria have remained discouragingly small, and fall far below the established standards. The American Public Health Association in its appraisal of health activities believes that two new cases of tuberculosis should be discovered and reported per annual death.

Since the beginning of the war the situation has changed somewhat in that case finding has been undertaken on a larger scale than ever before visualized through the routine chest x-rays of Selectees. Reliable information indicates that the Armed Forces will examine nearly 11,000,000 by the end of 1943. All of these men will have been x-rayed except a few hundred thousand inducted into Service in the early days of the war before the routine procedure of x-raying all was adopted.

Before 11,000,000 can be accepted by the military and naval forces, it is estimated that between 16,000,000 and 17,000,000 will have to be examined. In addition to this mass survey work now going on at the Induction Centers throughout the country, the U. S. Public Health Service simultaneously is carrying on an intensive case finding campaign among employees of certain war plants, as well as groups in the various government departments. The U. S. Public Health Service estimates that approximately 2,000,000 of these war workers will have been x-rayed by the end of this year. This activity is supplemented by similar campaigns which are being conducted in many parts of the states and cities. At present we have no accurate means of estimating the number discovered by these two sources, but it is believed that between 45,000 and 50,000 cases with significant tuberculous lesions will be found. Competent diagnosticians judge that at least 25,000 of this group discovered will be in need of sanatorium care and treatment. Most of this number in ordinary times would not have been suspected as having tuberculosis because they are mostly asymptomatic, and only a small portion of them have a history of contact. As a result relatively few have been examined previously at chest clinics.

In certain areas where the public health program is well developed, studies have been made to determine what proportion of the rejected or deferred draft registrants with active tuberculosis were already known by the health authorities. These tests indicate between 10-15 per cent had been previously reported to health departments. Among the industrial employees group only about 5 per cent had previously been known by health officers. Since a special age group is involved, it is believed that the incidence of *significant tuberculosis* found by those examined for induction into the Armed Forces has been lower than the industrial group, because the latter has a wider range of ages and includes workers of both sexes.

With the discovery of so many new cases of tuberculosis through this mass survey program, it is realized more than ever the need for greater facilities of hospitalization for these cases. With more or less dependable information available it makes it possible for the first time in the history of the tuberculosis program to carry out a campaign on a definite scale than has ever heretofore been possible.

The National Tuberculosis Association a few years ago, in order to determine the proper hospital facilities for the care and treatment of tuberculosis felt that there should be two available beds for treatment for every death occurring from this disease. An analysis of the ratio of the number of beds to deaths on this basis was made in 1941, but it was found only fifteen States and the District of Columbia met this standard, while fifteen States failed to reach the level even of one available bed per annual

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death. Fortunately, except for the shortage of beds for negroes, Virginia almost meets this requirement.

Now that case finding surveys are being made on a nationwide scale never before contemplated, it is obvious that facilities must be provided to care for those diagnosed cases in need of treatment which are now being found in earlier stages than was ever before possible. Therefore, a new standard has been established whereby it is advised that the ratio of three beds per annual death be established, thus raising the minimum standard, as previously adopted, from two to three beds per annual death. This new accepted method is to be exclusive of the beds provided to care for tuberculous inmates of mental and penal institutions, and also excludes the facilities made by Federal Hospitals for this purpose.

Some authorities argue that additional hospital facilities on a large scale will not be needed in view of the fact that the tuberculosis death rate in the country as a whole during the past decade has declined 35 per cent. We have no assurance, however, that this decline will continue; on the contrary it may be expected to increase.

The following information was taken from Statistical Data collected by Mary Dempsey of the National Tuberculosis Association:

DRAFTED MEN AND THOSE WHO TRIED TO ENLIST

Total number expected to be in the Armed Forces by end of 1943	11,000,000
Estimated number of men called for examination	16,000,000
Estimated number given X-ray examinations before induction	12,000,000
At least 1 per cent deferred for tuberculous conditions, including active and arrested cases, those with calcifications, etc.	120,000
One-third of those deferred are classified as having lesions considered significant	40,000
One-half of the significant cases are classified as moderately advanced and far advanced, all of which need sanatorium care	20,000
One-fourth of the remainder of the significant cases, classified as minimal, are considered to be in need of sanatorium care	5,000
Total number cases found among recruits who are in need of sanatorium care	25,000
After checking a representative sample of these 25,000 cases to health department reports, 87 per cent were found to be unknown previously	21,750

CASE-FINDING AMONG INDUSTRIAL EMPLOYEES

Total number to be given X-ray examinations by the end of 1943	2,000,000
One and one-half per cent will have been found to have tuberculosis	30,000
One-third of these 30,000 will have been classified as having active tuberculosis	10,000
Industrial workers with active tuberculosis who are considered to be in need of sanatorium care	6,000
After checking a representative sample of these 6,000 cases with health department reports, 95 per cent were found to be unknown	5,700
Total number of cases found to have significant lesions which need hospital care and which were previously unknown	27,450
Discounting this figure approximately 10 per cent, the accepted estimate in round numbers is	25,000

FRANK B. STAFFORD, M.D.

EDITOR'S NOTE—Dr. Stafford is first assistant physician at Blue Ridge Sanatorium, Charlottesville, Va.

The Care of Wives and Children of Enlisted Personnel of Armed Forces

THERE appears in the present issue of the MONTHLY the proposed plan for hospitalization and obstetric care of the wives and the medical care of the children of the enlisted personnel of the lower grades of the armed forces. This plan is supported by federal funds through the Children's Bureau and is to be administered by the Bureau of Maternal and Child Health of the State Health Department. It has been accepted by approximately forty of the states. Some of the states, notably Oregon, through

special committees tried to offer substitute plans for approval, but we are not aware that any of the substitute plans have been accepted or approved by the Children's Bureau. The plan seems to have some objectionable features as for example the principle of furnishing hospitalization and medical attention at government expense regardless of the financial ability of the family to take care of their own medical obligations. The fixed schedules of fees for obstetric and pediatric care has provoked some opposition. The Oregon substitute plan tried to eliminate the objectionable fixed fee schedule. The plan provides only for ward accommodations in the hospitals and the funds can not be used toward the payment of more elaborate hospital accommodations.

The Maternal Health Committee has supported a program for hospitalization of medically indigent obstetric patients from rural areas with abnormal conditions requiring hospital care. The plan for the obstetric care of wives of service men of the lower grades has no connection with the maternal and child hospitalization program, approved by the Maternal Health Committee. It is not felt that the plan for care of service men's families comes under the purview of the Maternal Health Committee, which is concerned only with the improvement of obstetric care for the mothers of Virginia to the end that the morbidity and mortality associated with pregnancy, parturition, and the puerperium may attain the desired irreducible minimum.

The proposed plan for the care of wives of service men was approved by the Council of the Medical Society of Virginia. Obviously the Council felt, and rightly so, that nothing would be gained by refusing to participate, particularly since some forty states had already approved and adopted the plan. Obviously the administration of the program will add another burden on the Bureau of Maternal and Child Health whose staff has already been appreciably curtailed by the war emergency. The program is not their idea and they had but little choice in the whole matter. One certainly hopes that it will not interfere with their efforts to protect the maternal health in the state of Virginia, in which in the past several years they have done a grand job.

The plan was no doubt conceived with the highest of patriotic motives and in a sense recognizes our immense obligations to the members in the lower grades of our armed forces. It is apparently an attempt to offer obstetric and pediatric care to the families of our sailors and soldiers, because of the inadequate facilities of the army and navy to take care of them—an obligation which the services have felt that they owed to the families of their members.

T. J. WILLIAMS, M.D., *Chairman,*
Maternal Health Committee,
Medical Society of Virginia.

S. 1161

DR. OSLER liked to talk about the migrations of Athena Medica. The fickle lady has had quite a journey since she left her native Cos before the Christian era—Alexandria, Arabia, Salerno, Padua, Paris, Leyden, Vienna, Edinburgh, London, Berlin. For the past three or four decades she has had her abode in these United States of America. How long this will continue may depend upon the action of the next Congress of the United States.

Supremacy in Medicine is in many ways like good poetry. Neither can be run by the clock nor subjected to time-and-a-half pay for over-time and holidays. Both are sensitive to outside interference and both thrive in an atmosphere of freedom. For neither, can the best environment be determined beforehand. No one can predict what the next great advancement in Medicine will be nor where it will occur. Of the two

XUM

Medicine is the more complicated and no two medical problems admit of the same solution.

Germany took the discovery of an Englishman, and, with its faith in Prussian obedience to iron law, wiped out small-pox from her boundaries. This country took the discovery of a German, and with the help of its social agencies, has greatly reduced the ravages of tuberculosis. A great Foundation has combined the knowledge of zoologists and sanitary engineers with diplomacy and conquered the hookwork. The same Foundation has taken the great discovery of the U. S. Army Medical Service and almost completely wiped yellow fever from the face of the earth. Typhoid fever has yielded to the combination of improved sewage disposal, control of water and milk supplies, and immunization. The pediatricians with their systematic vaccinations and their knowledge of nutrition are raising up a generation of super men and women. Who can foretell what effect the elimination of the diseases of childhood, that were wellnigh universal, will have upon the degenerative diseases that now head the mortality lists? The great discoveries in Medicine from Jenner and Koch to Sir Frederick Banting, almost without exception, have been made by private practitioners. Walter Reed might be considered an exception, for his experiments on the transmission of yellow fever were done in the Army. It was fortunate that the military Governor of Cuba was Gen. Leonard Wood, a medical man, who appreciated the possible value of the proposed experiments to the world at large. Beaumont also was an Army Surgeon, but he received no help or encouragement from the Surgeon General.

The curious thing about doctors, and it seems not to be understood by the public, is, that they strive hard to work themselves out of a job. There is less disease now than ever in the history of the world. The average duration of life has increased from 32 to 62 years. The American people are the healthiest people in the world. American Medicine has accomplished, and is accomplishing, wonders. No one questions this. The question that has been raised is whether it is doing all that it should. Its benefits are said to be available in full measure only to the rich and the poor. Various schemes and plans have been advocated for more evenly distributing medical service. The Wagner Bill contains the most colossal proposal yet advanced. It proposes to control the medical affairs of some one hundred and twenty-five million people. Can it be done without lowering the standard of American Medicine? That is the question. State Medicine is not new. It has been in operation in Germany since before that country lost its prestige in Medicine. It has been tried in England on a smaller scale. Reports from England have been conflicting. Certainly at first, panel Medicine was looked down upon by both the profession and the public. It has been tried in Russia and there it seems to have filled a real need. The distances, especially in Siberia, are so great, the population so scattered, and the doctors so few that it was necessary to have some plan for supplying the people with medical care.

The plan as set forth in Senate Bill 1161 is indeed an heroic measure. It is very much like treating a cold with sulfanilamide. The chance of killing the patient far outweighs the benefit to be expected. Heroic measures in Medicine are first subjected to animal experimentation and then are tried out cautiously, clinically. A number of localities, notably Utica and Buffalo, N. Y., Michigan, California, Massachusetts, New Jersey, Pennsylvania and North Carolina, are trying out various plans. Costly mistakes have already been made but not disastrous ones. With accumulating experience the plans are improving, and are being made to fit local conditions, urban and rural. A plan that suits one locality may not fit the needs of another group. With time it is conceivable that these plans will spread out and cover the entire country, and no harm will be done to medical standards.

Societies

The Augusta County Medical Association,

At its annual meeting early in August, elected the following officers for the ensuing year: President, Dr. A. M. McLaughlin of Waynesboro; vice-presidents, Dr. John Guss of Staunton, Dr. J. H. Thomas of Greenville, and Dr. Kenneth Bradford of Staunton; secretary, Dr. George Kinser of Waynesboro; and treasurer, Dr. J. E. Womack (re-elected) of Staunton. Delegates were also elected to the annual meeting of the Medical Society of Virginia.

The Mid-Tidewater Medical Society

Held its regular quarterly meeting at Urbanna on July 27th, with the president, Dr. H. A. Tabb of Gloucester in the chair. Dr. M. H. Harris of West Point is secretary. Delegates were elected to the State Society meeting in Roanoke. The program consisted of an open forum on "Cause and Treatment of Diarrheas and Dysentery", the discussion being led by Drs. J. M. Hutcheson and O. L. Hite of Richmond. Dr. E. T. Trice, chief of the medical section of the Selective Service for Virginia was also present and brought the greetings and thanks of Governor Darden to the doctors for their work and cooperation for the Selective Service during the past three years.

Members and guests enjoyed a luncheon at the hotel and voted to hold the Fall meeting at Millers Tavern.

Rockingham County Medical Society.

At a meeting of this Society held on August the 9th, the delegate and alternate delegate to the State Society meeting in Roanoke were named, and the following elected officers for the coming year: President, Dr. H. G. Preston of Harrisonburg; vice-president, Dr. A. L. Hammer of McGaheysville; and secretary-treasurer, Dr. Thomas Scarlett (re-elected) of Harrisonburg.

News

The Roanoke Meeting.

The Medical Profession of Roanoke and the City of Roanoke are again looking forward with pleasure to entertaining the coming meeting of the State Society, which meeting will take place October 25-27.

Since the meeting is scheduled for a somewhat later date than that of last year, climatic conditions should be ideal. The atmosphere should be crisp but not too cool; the coloring of the mountain foliage should be at its best; but regardless of all these things, rain or shine, air-conditioned Hotel Roanoke awaits what it is hoped will be an excellent meeting.

While the members of the Medical Profession in the armed forces are doing their job with enthusiasm, those who are forced to remain in civil life have a no less exacting task and have upon them also the obligation to keep abreast of the advances in medicine.

As to transportation, there is good reason to hope that the efforts at present being made will result in relaxation of gasoline restrictions, so that those who look forward to driving may not be disappointed but, failing in this, a reminder that Roanoke is served by railroads from all sections of the state may not be amiss.

Business sessions will be held Monday morning and the Scientific sessions will open that afternoon.

The papers will be of the usual high standard and there will be no sectional meetings. The Monday evening session, at which time the president, Dr. J. M. Emmett, will give his address, will be open to the public. There will be three guest speakers from the medical department of the armed forces and they will speak on subjects covering their experiences in foreign service. The preliminary program appears in this issue of the MONTHLY.

The membership will be interested to know that there will be a few scientific exhibits and that the usual commercial exhibitors will be on hand, all available space having been contracted for some time since.

In the way of entertainment, the committee has been

XUM

busy and reports that there will be a cocktail party on Tuesday evening followed by a dinner at which there will be a humorous speaker. For the ladies, a luncheon is being planned on Tuesday and arrangements for the meeting of the Auxiliary on Tuesday afternoon.

A list of Roanoke hotels, with rates, was published in the June MONTHLY. It is suggested that reservations be made promptly as possible.

News of Medical Men in Service.

Lt. Richard Bland Williams, M.C., U. S. Navy, who was stationed at Guam when it fell to the Japanese, is reported as a prisoner of war in the Zentsuji war prison camp on Skikoku Island. Lt. Williams' home is Norfolk and he graduated from the University of Virginia in 1939.

Dr. Wm. R. Jones, Jr., Richmond, has been promoted to Captain M.C., U.S.A. He is stationed in the Pacific area.

Dr. Edmund LaPrade of Richmond has recently been promoted to the rank of Captain in the Medical Corps, U. S. Army.

Capt. William O. Porter, M.C., of Roanoke, is serving as chief of the X-Ray Department with the 60th Station Hospital in North Africa.

State Health Department Personnel Changes.

Dr. William Y. Garrett, who has for sometime been health officer of Northampton County with headquarters at Eastville, has been appointed health officer of Newport News, and entered upon his duties there on September 1.

Dr. J. Walter Jackson of Machipongo accepted the position of acting health officer of Northampton County, effective this date.

South Boston Hospital Facilities to Be Merged.

The South Boston Hospital, with its entire equipment, owned and operated by the late Dr. R. H. Fuller, has been purchased by Dr. I. K. Briggs and T. C. Watkins, Jr., acting for his son, Capt. William R. Watkins, M.C., now on overseas duty with armed forces. The hospital will be taken over in the near future and its active personnel will consist of Dr. Briggs as surgeon; Dr. W. C. Brann obstetrician; Dr. John A. Owen anesthetist; and a full staff of hospital assistants, nurses, etc. As soon as possible after the South Boston Hospital has been taken over under the new management, Dr. Briggs will close the Halcyon Hospital, transferring its modern equipment to the South Boston Hospital, which will have forty-five beds and will be one of the most completely equipped and up-to-date hospitals of its size in the State, and open to the doctors in that section.

Married.

Dr. Spotswood Robins of Richmond and Miss Sarah Emma Hutcherson of Reidsville, N. C., July 28th.

Dr. Edwin Burwell Jones Whitmore, Jr., of Petersburg, and Miss Claudine Price Burkholder of Richmond, July 31st. Dr. Whitmore is a member of the class of '38 of the University of Virginia, Department of Medicine, and is now on the staff of the Petersburg State Colony.

Dr. M. Benmosche and Mrs. Gladys Goodman of New York City, the middle of August. Dr. Benmosche is a member of the Medical Society of Virginia, and an ex-president of the Medical College of Virginia Alumni Association in New York City.

Dr. Arnold Resigns from Colony Post.

Dr. G. B. Arnold, who has been connected with the staff of the State Colony since 1929 and its superintendent since 1933, has tendered his resignation, effective October 1. He plans to enter private practice in Lynchburg.

Members of Roanoke Board of Health.

Dr. Elbyrne G. Gill and Dr. W. R. Whitman have been re-appointed members of the Board of Health for the city of Roanoke for a term of two years. Dr. Gill is chairman and Dr. Whitman vice-chairman of the Board.

Appointed to State Board of Health.

Dr. J. A. Abercrombie of Richlands has been appointed by Governor Darden as a member of the State Board of Health, to fill the unexpired term of Dr. W. R. Williams, deceased, of Richlands. The term ends in June 1947.

The Fourth District and Southside Virginia Medical Society

Will hold its regular meeting at Southside Community Hospital, Farmville, on Tuesday, September the 28th, at 2:30 P. M. Dr. B. H. Knight of Surry is president, Dr. C. E. Martin of Emporia secre-

tary, and Dr. Wright Clarkson of Petersburg chairman of the Steering Committee.

The program includes the following papers:

Traumatic Lesions of the Abdomen by Dr. Carrington Williams of Richmond.

Immunization against Diseases of Today by Dr. W. Ambrose McGee of Richmond.

Sterility by Dr. William Bickers of Richmond.

Recognition and Management of Ruptured Ectopic Pregnancy by Dr. Thomas G. Hardy of Farmville.

Abdominal Operations by Dr. George H. Reese of Petersburg.

Supper at the hospital will follow the program. As this is the annual meeting, election of officers will be held at a business session.

New Hospital Named for Dr. McGuire.

Dr. Hunter Holmes McGuire, personal surgeon to Stonewall Jackson and for many years prominent surgeon of Richmond, has been honored in the naming of the new army general hospital now under construction just outside Richmond. He served as medical director of the Second Army Corps in the Confederate Army.

Assistant to Dr. Rucker.

Dr. Gwen S. Hudson, class of '37, University of Toronto Medical School, after several years of specializing in obstetrics, has entered private practice as assistant to Dr. M. P. Rucker, with offices in Medical Arts Building, Richmond. Dr. Hudson came to Richmond in July 1940 and was first at St. Luke's Hospital, but has spent the past two years in obstetrical work at the Medical College of Virginia Hospital.

Connected With Raiford Hospital.

Dr. Joseph D. Hough is now a member of the staff and head of the department of internal medicine at Raiford Memorial Hospital, Franklin. Dr. Hough was at Duke University from 1937 to 1941, where he was connected with the department of internal medicine and was resident in the diagnostic clinic. From that time until he located in Franklin he was an assistant instructor in New York University Hospital.

Film on Continuous Caudal Analgesia in Obstetrics.

Eli Lilly and Company, Indianapolis, announces the release of a 16-mm. silent motion picture in color on the subject, "Continuous Caudal Analgesia in Obstetrics". The film is available to physicians for showing before medical societies and hospital staffs. It deals with the history, anatomy, and physiology of caudal analgesia and demonstrates the technic of use in obstetrics.

The film was made at the U. S. Marine Hospital, Staten Island, New York, by authorization of the Surgeon General, U. S. Public Health Service, and the demonstrations were carried out by the originators of the technic, Dr. Robert A. Hingson and Dr. Waldo B. Edwards.

Army Hospital Named for Dr. McCaw.

An army general hospital in Walla Walla, Wash., has been named in honor of a former Richmonder, the late Brigadier General Walter Drew McCaw, who graduated from the Medical College of Virginia in 1882 and two years later entered the service of the United States army. General McCaw saw active service in many parts of the world and was also for sometime in charge of the library of the Surgeon General's office in Washington. He was a son of the late Dr. James B. McCaw who was director of Chimborazo Hospital, Richmond, in the war between the states.

Mississippi Valley Medical Society.

A splendid program has been arranged for the Ninth Annual Meeting of the Mississippi Valley Medical Society at Quincy, Ill., September 29-30. Over 20 leading clinician-teachers will put on the usual intensive program that has always featured this—"The Mid-West's Greatest Intensive Post-Graduate Assembly for General Practitioners." This will be practical and will be keyed to war-time medicine. All ethical physicians are invited to attend. Medical officers of the army and navy are cordially invited to be guests of the society if they register in service uniform.

A detailed program of the meeting may be obtained from the Secretary, Harold Swanberg, M.D., 209-224 W. C. U. Building, Quincy, Illinois.

Appointments on West Virginia Public Health Council.

The Governor of West Virginia has reappointed the following as members of the Public Health Council of that State for a term of four years, effective July 1, 1943: Dr. W. R. Goff of Parkersburg, Dr. W. P. Bittinger of Summerlee, and Dr. Walter E. Vest of Huntington.

XUM

The Governor also appointed Dr. J. E. Offner of Weston as State Health Commissioner, his term of office expiring May 31, 1947.

Our Zone Number Is 19.

The delivery of mail intended for the Medical Society of Virginia or the Virginia Medical Monthly may be expedited if our zone number is included. Mail should be addressed 1200 East Clay Street, Richmond 19, Virginia.

Dr. Walter B. Cannon,

President of the American-Soviet Medical Society, was formally inducted as a member of the Academy of Sciences of the U.S.S.R. at a reception given in his honor by the Soviet Embassy on August 12th. Dr. Cannon, who is professor emeritus of physiology at Harvard, is the first American to be a member of both the Academy of Sciences of the United States and that of the U.S.S.R. The American-Soviet Medical Society which Dr. Cannon now heads has been organized to stimulate the exchange of medical information between this country and the Soviet Union, and Dr. Cannon has done much to encourage this exchange. Its national headquarters are at 130 West 46 Street in New York City. The American Review of Soviet Medicine, its publication, maintains editorial offices at 1900 East Monument Street in Baltimore.

Eye Health and Safety News

Is a bi-monthly newsletter, published by The National Society for the Prevention of Blindness, for free distribution among physicians, nurses, public health officials, social workers, educators, safety engineers, and others who are professionally interested in some aspect of sight conservation. Each issue contains a variety of brief items on developments and new projects in the campaign for prevention of blindness. A regular feature is the reporting of activities in this field carried on by official and voluntary state agencies.

Those interested in receiving this new publication regularly are invited to write to the Society, 1790 Broadway, New York (19), N. Y.

The Mississippi Valley Medical Editors' Association

Has cancelled the 1943 meeting (which was to have been held at Quincy, Ill., on September 20) and no further meetings will be held for the duration. The present officers will be in charge for the first post-war meeting. Further details may be obtained from the President, Dr. James Dunn, 1002 Davenport Bank Bldg., Davenport, Iowa, or the Secretary, Dr. Harold Swanberg, 209-224 W. C. U. Bldg., Quincy, Ill.

Dr. Joseph Bernstein,

Formerly of Arlington, is now located in Washington, with offices at 3217 Connecticut Avenue, Northwest. He served with the armed forces from May 1941 until June 1942, after which he was on the staff of the Worcester (Mass.) State Hospital, until June of this year.

Dr. William L. Davis,

Class of '40, University of Virginia Medical School, has located at Shelton Place in Princess Anne County where he is engaged in general practice. Upon leaving the University, Dr. Davis served a rotating internship at the Charleston, W. Va., General Hospital.

Dr. Haden on University Board.

Dr. William D. Haden of Charlottesville has been appointed by Governor Darden to the board of visitors of the University of Virginia to fill the unexpired term of the late Hollis Rinehart of that city.

Army Hospital Dedicated.

The Woodrow Wilson General Army Hospital, located near Staunton, is being officially dedicated on September the 1st, with interesting exercises and the presence of a number of distinguished guests. The program includes the presentation of the hospital by General Somervell to Major General Norman T. Kirk, M.C., Surgeon General of the U. S. Army, who will officially accept it and in turn present it to Colonel Sidney L. Chappell, M.C., commanding officer.

New Books.

The following are recent acquisitions to the Library of the Medical College of Virginia and are available to our readers, the only cost being return postage:

Abbott, G. K. and others—Physical therapy for nursing.
Adler, Alfred—Understanding human nature.
Anastasi, Anne—Differential psychology.
A.R.N.M.D.—Nutritional deficiency in nervous and mental diseases.
Baker, John R.—The scientific life.
Bauer, J.—Constitution and disease.
Beebe, G. W.—Contraception and fertility in Southern Appalachians.

Bennett, G. A. & others—Changes in the knee-joint at various ages with particular reference to the nature and development of degenerative joint disease.
Bernheim, B. N.—Adventures in blood transfusion.
Bicknell, E. P.—Pioneering with the Red Cross.
Bogert—Criteria for vertebrate subspecies, species and genera.
Chadwick and Pope—The modern attack on tuberculosis.
Council on Dental Therapeutics—Accepted Dental Remedies.
Craig, C. F.—Laboratory diagnosis of Protozoa and Protozoa diseases.
Curie, M. S.—Pierre Curie, tr. by C. & V. Kellogg.
Dallavalle, J. M.—Micromeritics—the technology of fine particles.
Darlington & Appleton—Introduction to medical sciences.
Dimnet, E.—Art of thinking.
Dodge, R. & Kahn, E.—Craving for superiority.
Doherty, Wm. B. & Runes, D. D.—Rehabilitation of the war injured.
Dorsey, J. M.—Foundations of human nature.
Douglas, O. B. & Holland, B. F.—Fundamentals of educational psychology.
Dry, T. J.—Manual of cardiology.
Eisenchiml, Otto—Without fame.
Gemmill, C. L.—Physiology in aviation.
Gibbs, F. A. & Gibbs, E. L.—Atlas of electroenophalography.
Goldman, H. M.—Periodontia, a study of the histology, physiology and pathology of the peridontium and the treatment of its diseases.
Grabbe, P. & Murphy, G.—We call it human nature.
Grant—Atlas of anatomy. Vol. 1.
Greulich, W. W. & others—Somatic and endocrine studies of puberal and adolescent boys.
Ham, A. W.—Doctors in the making: The art of being a medical student.
Hamburger, V.—Manual of experimental embryology.
Hamilton—Exploring the dangerous trades.
Harris, R. C. & Thiman, K. V., ed.—Vitamins and hormones.
Hartman, G. W.—Gestalt psychologies.
Hawley & Mauer-Mast—Fundamentals of nutrition.
Heidbreder, E. F.—Seven psychologies.
Holt, Rackham—George Washington Carver.
Horney, Karen—Neurotic personality of our time.
Hrdlicka, Ales—Catalogue of human crania in the U. S.
Huddleson—Brucellosis in man and animals.
Jackson, J. A.—Guiding your life; with psychology as a key.
Jellinek, E. M.—Effects of alcohol on the individual.
Johnston, P. W.—The relation of certain anomalies of vision and lateral dominance to reading disability.
Judd, C. H.—Educational psychology.
Klinefelter, L. M.—Medical occupations for girls.
Kovacs, R. ed.—Yearbook of physical therapy, 1941.
Lederer, F. L.—Diseases of the ear, nose and throat.
Linn, J. W.—Jane Addams; a biography.
McCormack—Metabolic cost of maintaining standing position.
McGraw, M.—The neuromuscular maturation of the human infant.
Manson-Bahr—Synopsis of tropical medicine.
Maxson, L. H.—Spinal anesthesia.
Mellon, R. R. & Others—Sulfanilamide therapy of bacterial infections.
Muller—Clinical significance of the blood in tuberculosis.
Meyerson, Abraham—Foundations of personality.
Nelson, K. L. J.—Massage in nursing care.
Neuhof and Jemerin—Acute infections of the mediastinum.
O'Hara—Air-borne infection: Some observation on its decline.
Oman, C. M.—Doctors aweigh!
Papanicolaou, G. N.—Diagnosis of uterine cancer by the vaginal smear.

For Sale—

Good X-Ray and Sterilizing outfit. Address "X-Ray", care this journal, 1200 East Clay Street, Richmond 19. (*Adv.*)

Wanted Physician—

Excellent location for General Practitioner and Internist in one of Virginia's best industrial towns in Shenandoah Valley. Modern hospital privileges available to right party. Address "D.C.F.", care the MONTHLY, 1200 East Clay Street, Richmond 19. (*Adv.*)

For Sale:

Physician's instruments and equipment, including infra red lamp, polysine generator, and microscope. Address inquiries to "Instruments", care VIRGINIA MEDICAL MONTHLY, 1200 East Clay Street, Richmond 19. (*Adv.*)

Obituaries

Dr. Thomas Demoval Armistead,

Roanoke, died on August the 7th, in the seventieth year of his age. After his graduation from the Medical College of Virginia in 1898, he located in Roanoke, and was a former city physician and coroner. He was largely instrumental in securing for the city a health officer, and was a participant in the drive for the Roanoke Hospital and clinic and

for the Burrell Memorial Hospital for colored citizens. Dr. Armistead had been a member of the Medical Society of Virginia since 1902 and was a fellow of the American College of Surgeons. He was also active in church work. His widow and several children survive him.

At a called meeting of the Roanoke Academy of Medicine August 7, 1943, the following resolution was adopted:

The Roanoke Academy of Medicine hears with deep regret the departure of Dr. Tom Armistead, and wishes to extend their sincere sympathy to his bereaved family, and to express to them our sincere appreciation of Dr. Armistead as a fellow practitioner and citizen of our city.

To say that he was loved and esteemed by all who knew him expresses, as near as words can, his position in our city.

It is resolved that a copy of this be sent to his family, to the local paper, and the Virginia State Medical Society.

Signed:

Committee

PAUL DAVIS
W. L. POWELL
G. M. MAXWELL.

Dr. Rawley Harrison Fuller,

South Boston, died July 23rd as the result of a stroke suffered the previous day. He was a native of Pittsylvania County and sixty-four years of age. Dr. Fuller graduated in medicine from the former University College of Medicine, Richmond in 1905, and joined the Medical Society of Virginia that year. He was a member also of a number of other medical organizations, of the South Boston Lion Club, and the South Boston Masonic Lodge, and had been for a number of years a surgeon for the Southern Railway. He was the owner of the South Boston Hospital, which he opened in that city in 1927. Dr. Fuller is survived by his wife and four children.

Dr. John Blair Fitts,

Richmond, assistant professor of orthopedic surgery at the Medical College of Virginia, died August the 19th after an illness of sometime. He was born in Blacksburg fifty-three years ago and studied medicine at the Medical College of Virginia, graduating in 1914. Following this he took up special work in several northern hospitals. He served through World War I, being connected with an orthopedic hospital in France. He was a member of the Medical Society of Virginia and a number of other medical and special organizations. His wife and four children survive him.

Dr. Ralph Waddell Brown,

Retired physician of Roanoke, died August the 9th, having been in ill health since his retirement from active practice in 1936. He was a native of South Carolina and seventy-six years of age. Dr. Brown graduated from the university of the City of New York in 1889 and located for practice in Roanoke in 1893. He was a past president of the Roanoke Academy of Medicine and active in civic and church affairs. He served in the World War as captain in the medical corps and was a member of the American Legion Post No. 3. He had been a member of the Medical Society of Virginia for forty years. Dr. Brown is survived by his wife and several children.

Dr. W. Brownley Foster,

Associate public health physician for the State Health Department, and former director of Public Welfare for the city of Richmond, died suddenly on August the 10th, having been stricken while on the street. He was a native of Richmond, sixty-five years of age, and a graduate from the Medical College of Virginia in 1901. Prior to his health work in Richmond, Dr. Foster organized a city health department in Roanoke and was its head for fourteen years. While there, he was also a president of the Roanoke Academy of Medicine. Upon returning to Richmond to head its Welfare Department, he took an active part in all its civic work and was in addition a Shriner and Kiwanian. His wife and two daughters survive him.

Dr. Arthur Thomas McCormack,

Louisville, State Health Commissioner of Kentucky and Secretary of the Kentucky State Medical Association, died of an acute heart attack on August 7th. He was President of the Southern Medical Association 1939-1940 and at the time of his death was a member of its Board of Trustees. He has been honored by many medical and lay organizations.

Dr. J. N. McCormack organized the state health work in Kentucky sixty-four years ago and he and his son, Dr. Arthur, have been continuously in charge of the State Health Department of Kentucky for those sixty-four years. His wife and a daughter survive him.